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**THE BUSINESS OF FARMING**

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*By Specialists of the Bureau of  
Agricultural Economics*





## PREFACE



**F**ARM MANAGEMENT ability is boiled-down horse sense seasoned with study and science.

The United States Department of Agriculture has collected the management records of upwards of 100,000 farms representing nearly every region of the country. From all of these records and other studies a few things have been learned that apply to almost any farm.

Based on this information, the lessons of the following series have been prepared by several different men, each an authority in his line.

Washington, D. C.

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# The BUSINESS of Farming

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## LESSON 1 . Farm Management

J. CLYDE MARQUIS

FARM ECONOMICS is at the same time a new subject and one of the oldest in the experience of mankind. Men have been struggling with the problems of gaining a living, and something more, from land since the beginning of history, but it is only within the last 50 years that we have begun to make scientific studies, gather records of experience, and work out principles of management for those who produce wealth from the soil.

After the 3,000 years of known agricultural history, there was very slow advancement in science, in the use of power and other aids to making the soil produce, until the last two centuries; then came the development of the science of chemistry, and ways of making soils produce more were developed; then better culture, selection, and breeding of plants and animals, and the science of soil improvement through cropping systems. Each in turn has been adopted into practice. During all this period the economics, or the science of putting soils, crops, livestock, and labor together to bring a satisfactory result has been advanced only through the slow expensive system of experience.

Within the last 50 years we have applied the yardstick, scales, and other measurements to farm operations to measure results, and out of this application experience has developed which has been laid down as principles to guide those who need help. The new farm economics is the science of measuring the various operations and their relations to assure satisfactory results, to reduce the probable losses and failures, and to make the farm return more than is put into it in seed, fertility, and labor.

### *Experience Necessary for Success*

Farming is a business that calls for a thousand decisions. Success depends upon making the right decision at the right time. Some question arises each day which requires the farmer to make a quick decision on a matter which may take a year to work out. The relations of soil to crops; to livestock; to cultivation; to animal husbandry; and the thousand other relationships must be understood to make the right decision. That is why experience counts for so much in farming. It takes a long time to learn the many things that must be known in order to farm successfully. That is why experience is needed, in addition to school education, to make a good farmer. No book or teacher can foresee the many problems that will arise. Only experience and good judgment combined with learning lead to success.

There are two groups of economic problems: First, those that concern the individual farm with which a farmer himself deals and about which he must make his own decisions; second, those dealing with groups of farmers within a community, a city, the whole country, or in various parts of the world, which must be dealt with by group action—either by groups of farmers or larger groups including all the citizens of the community. In these problems the individual farmer can not make his own decisions, but must work with others.

Most farmers at this time find themselves with a certain set of conditions surrounding them. It is not a time when many farmers are moving to new lands. Those that are moving are leaving the farm to go to the city. Therefore, it is timely to talk principally of those things that each farmer might do to improve his conditions where he finds himself.

This is a time of adjustment to changes that are taking place. Such adjustment may mean that some farmers will have to move. Farms may be combined into larger units, and radical shifts of farming systems may be called for. These will take place slowly, but it is important that farmers in every community watch for the signs of the times and make these shifts early enough to avoid loss or disaster.

### *Regional Problems Differ*

No guide to successful farming has been found that is better than that suggested by the experience of the more successful farmers in a community. That is why most of the things that have been learned in farm management have come from studies and surveys of successful and unsuccessful farms. A Georgia cotton farmer may use only few acres, small buildings, and little machinery, whereas a Pennsylvania dairy farmer usually has three times as much land, large expensive buildings, more machinery, more horses and cows, and he uses more labor. The Corn-Belt farmer who raises corn and hogs may have less acres than the dairy farmer, less expensive buildings, but may require more field machinery. The wheat farmer of the Great Plains uses more acres of land, larger machines, more power, but he has only a few buildings and relatively few livestock. He needs extra help during the summer, but is

not busy during the winter, whereas the dairy farmer works the year around. The fruit farmer may have fewer acres, but he has a lot of work to do at certain seasons of the year and nothing to do at other seasons.

This great variety of combinations makes it necessary to work out a system of farming and farm economics for each section of the country and for each type of farming. Therefore, it can not be said that there is any best size of farm without considering the combination of crops and livestock that are to be grown. You find yourself on a farm obtained in one of several ways—by purchase of your own choice, by inheritance, or by lease. It may not be easy to change the size of your farm, as land in the neighborhood may not be available. You must take your soil as you find it and your relation to market is fixed, and the type of farming of the community may be definitely determined. If this is true, it is hard to make radical or abrupt changes in the operation of the place. You must take things as you find them and work out improvements gradually.

Conditions are always changing and no plan is permanent. It has to be adjusted from year to year to changing conditions. If it were possible to work out a model, uniform system for each community which would be universally profitable, it would have been done years ago. The shifts which are necessary to meet changing conditions have made this impossible. These are not quick shifts; they sometimes cover a decade. For instance, the competition of new producing sections may lower the price of your principal cash crop, and you must gradually change to the production of another crop. Foreign competition may change prices and bring about shifts. New machinery has its effect, and changes in market demand through improved transportation. In many cases these forces are beyond control of the individual farmer, and he has no choice but to accept them.

### *Do You Know These?*

Good farm management begins with an analysis of the conditions surrounding the farm. You must be able to answer some of these questions:

Is all of your land being utilized to produce something?

Is each of your acres producing the crop—either grass, forest, or tilled crop—which is adding to its value?

Are you growing largely the crop that is most profitable in your community?

Are you growing crops that distribute your labor through the season, keeping you busy most of the time?

Is your machinery economical and labor-saving?

Is your use of power (horses or tractors) being applied at the right time to get the work done? Are you keeping livestock that turns raw material into market products economically? Are all of your livestock units productive?

Is there balance between your crop and livestock production which affords a steady income and furnishes you profitable employment

throughout the year? Is the plan of your farms and buildings such as saves labor and time? Are the things you have to sell such that a single crop failure can not wipe out your income? In other words, are the risks on your operations sufficiently divided?

Are you keeping records and accounts that show you your costs and income from each acre and each animal unit? Is your labor bill excessive for extra labor? Are you producing all that you might of the things that are utilized on your own farm and in the household?

Are you producing the highest grade product which your market demands? Are you keeping informed upon price changes and competition in your market? Are you looking ahead to meet changes that are likely to occur?

In succeeding talks of this series ways and means of getting at the facts to answer these questions will be discussed by men experienced in each subject. The experience gleaned from surveys of tens of thousands of farms throughout the United States will be drawn upon. Each subject will be based upon personal experience and will cover cases which are typical of certain regions and of certain types of farming.



## LESSON 2 . *Analyzing the Farm Business*

H. W. HAWTHORNE

**S**OME FARMERS have kept farm accounts and analyzed their business in their own way for a great many years, but only during recent years have many farmers attempted such a uniform systematic analysis of their business as would permit direct comparisons to be made between one farmer's business and that of his neighbor. The Federal Department of Agriculture and some of the agricultural colleges and experiment stations have worked out a method of analyzing the business of a farm so that the strong points and weak points of the business may be readily discerned. At present several thousand farmers in the United States analyze their business each year, find their strong and weak points, and attempt to strengthen the weakest points.

The method includes a farm inventory, which is the first thing to consider. It is a list of the amount and value of all farm property, land, buildings, machinery, and livestock at the beginning and end of the farm year. In any method of analysis the farm inventory is important, since it shows whether the business has increased during the year. Whether the year as a whole has been profitable can not well be determined without the inventory. For illustration, you may be much discouraged from your year's operations because the sales have not amounted to as much as your year of effort and operation would justify; but there may have been considerable growth and increase in numbers of your livestock which have not yet been sold. On the other hand, without an inventory you may be fooled in thinking that your business has been very profitable, whereas your high returns may have been due to sales of livestock which have been growing in value for two or three years, and had made most of their growth during previous years.

### *Record Crop Facts*

The crop record comes next. In analyzing the farm business a record should be made of the acreage and yield of each crop, and of the amount and value of sales. Crops fed to livestock on the farm are not included as sales, but crops held from the previous year for feeding on the farm should be inventoried as feed held for the next year's business.

Then comes the livestock record. This should include the number and value of each kind of livestock at the beginning and end of the year, and of all sales and purchases within the year, as well as the amounts and values of all livestock products sold, such as milk, butter, eggs, and wool. Any of these products exchanged for groceries or other supplies should be regarded as receipts of the farm. The principle to follow in recording the year's farm receipts is to include the value of all farm products leaving the farm, whether sold or given in exchange for something else.

Other sources of income also must be recorded. It frequently happens on farms that money is received for man or team labor, or for machine work done off the farm, and to which some part of the farm business has contributed. These should all be regarded as receipts from the business.

The sales of crops, livestock, and products, and the receipts from outside work, together with increases in the farm inventory will comprise the farm receipts for the year. But having your farm receipts for the year alone will not tell how much you have made from the business, for there are numerous expenses connected with the business which should be deducted.

Farm expenses may be considered under five divisions—current expenses, family labor, decrease in value of feed, decrease in value of livestock, and depreciation on buildings and machinery.

Current expenses include money paid out for labor, for repairs of machinery, buildings, fences, etc., and for such other items as seeds, fertilizer, horseshoeing, veterinary fees, insurance, and taxes.

The unpaid family labor represents the labor done by members of the family aside from the farmer himself. This is usually determined on the basis of what it would cost to have the same work done by hired labor.

### *How to Determine Farm Income*

After the amounts of the farm capital, of the farm receipts, and of the farm expenses have been obtained, the business may be summarized by subtracting the expenses from the receipts which leaves what is called the farm income. This farm income represents the earnings for the farmer's own labor, and his return for the use of the capital. But it does not include the value of any of the family living obtained directly from the farm.

After the farm income has been determined the returns from the farmer's own labor may be obtained by subtracting a fair rate of interest for the use of the capital from the farm income. This leaves what is called "labor income."

With the labor income one farm in a locality may be compared with others as to the size of the income. A study of a large number of farms as to labor incomes and other measures of success has brought out that there are a number of factors which materially affect the success of the organization and management of a farm.

On the majority of farms success is primarily dependent upon four important factors: First, size of business; second, yield of crops; third, returns from livestock; and fourth, the efficiency of labor. Many other factors have their influence and must not be overlooked on a given farm, but in the majority of instances the farms which are better than the average of the community in these factors are generally successful.

Unprofitable farms may be too small in that the size of the business is not sufficient to return a good income, even though yields may be good. If yields are too low there is no satisfactory margin. If the livestock is not returning products or gains in return for feed and labor there is no net income, and if labor is not used efficiently the expenses may exceed income and leave no balance for the operator.



### LESSON 3 . *Size of Business in Relation to Returns*

H. W. HAWTHORNE

**U**NLESS a business is running at a loss, it is evident that the larger the business the greater the returns, other things being equal. There are variations from farm to farm in some factor or another of those which go to make up a farm business, and no two farms are alike in every respect. But in spite of this the results from studies in several localities of the United States have shown that the one-third of the farms in each locality having the largest-sized business have averaged two and one-half times as large labor incomes as the third having the smallest-sized business.

A good 80-acre corn and hog farm in central Indiana had a \$757 labor income for an average of eight years; a 120-acre farm, \$1,362; a 160-acre farm, \$1,632; and a 240-acre farm, \$2,356.

Near Madison, Wis., a good 8-cow dairy farm averaged \$252 labor income for five years; a 16-cow farm, \$598; and a 32-cow farm, \$997.

In a locality in east Tennessee a labor income of \$1,153 was made last year on a good 160-acre dairy farm with 15 cows, and \$2,029 on a 250-acre farm with 40 cows.

In western Washington a labor income of \$391 was made on a poultry farm with 750 hens, and \$665 on one with 1,500 hens.

One of the better farms in a locality in the hills of southeastern Ohio, which raised 40 acres of crops, had a seven-year average labor income of \$459; one raising 60 acres of crops, \$824.

### *Acres and Labor Income*

A good apple farm in the Shenandoah Valley of Virginia, with 25 acres of bearing orchard, averaged \$988 labor income for five years; one with 50 acres of bearing orchard, \$1,878; one with 75 acres, \$3,785.

In Polk County, Fla., a good citrus-fruit farm, with 9 acres of bearing grove, returned a six-year average labor income of \$1,420; one with 18 acres, \$2,430; and one with 27 acres, \$4,990.

In a locality in southwestern Georgia one of the better cotton plantations, with 100 acres of tilled land, made a labor income of \$2,204 in 1918; one with 200 acres, \$4,177; and one with 300 acres, \$5,948.

In Gloucester County, N. J., a farm with 20 acres of truck crops had a three-year average labor income of \$878; one with 30 acres of truck crops, \$1,693; and one with 40 acres, \$2,545.

In the Palouse country of Idaho and Washington, where wheat is the principal crop grown, a farm with 80 acres of wheat made a three-year average labor income of \$254; one with 140 acres, \$536; and one with 280 acres, \$1,060.

These examples illustrate that as size of business increases labor income goes up. This is generally true wherever the locality, and whatever the type of farming, providing it is not an unusually bad year.

The examples also illustrate that "size of business" is not necessarily the number of acres of land in the farm. Of two farms in a given locality, each with the same number of acres, one may have a much larger business than the other by using more of the land for crops, by growing more intensive crops, or by keeping more livestock. A few acres of truck crops or of fruit may represent as large a business as many more acres of grain and hay crops, or a few high-producing dairy cows, or a few hundred chickens, as large a business as many more animals of the general livestock-farming type. In some instances the number of acres of land in the farm is a good measure of size of business; in others the number of acres of crops is better; in some the number of dairy cows or of hens is better; and in others the number of acres of bearing orchard or grove.

### *Farmer's Ability a Factor*

To emphasize the importance of size of farm business is not to recommend that a large-sized business be conducted on every farm, or that all farmers have very large acreages of land, for there are limits to the size of the farm business that a given man has the ability to operate. It is among the better farmers of the locality that the largest businesses are conducted most successfully.

There are many farms in the country which have businesses that are so small that it can not reasonably be expected that they will return enough to support a farm family very well. In a locality in central Indiana, where the eight-year average annual receipts were \$3,007 per farm, eight of the farms had less than \$1,000 receipts, and after subtracting the expenses of operating the farm, seven of them netted less than \$500 for the farmer's labor and his capital.

The receipts from 40 of a group of 97 farms in a locality in the hills of southeastern Ohio were less than \$500 in 1926. Receipts from 29 of a group of 50 farms in a middle Tennessee locality fell below \$500 in 1925. To the farmers on such farms as are represented by these groups an increase in size of business is to be especially recommended.

The size of business may be increased by buying or renting more land. This is sometimes necessary, but not always advisable. In a group of 22 farms in a locality in middle Tennessee, with fewer acres of land in crops than on more successful neighboring farms, 14 could have reached the crop acreage of the more successful neighboring farms without buying or renting more land; some could have done it by utilizing the available idle crop land; some by using a little of the pasture land; and some by clearing some brush land that is not producing much at present. In addition to increasing the acreage of crops without buying or renting more land, the size of business may be increased by:

*First.* Growing crops that require more labor or following a more intensive form of farming. A farmer in the hills of southeastern Ohio increased the size of his business by having a few acres in apple orchard from which he sold on the average \$50 of apples per acre each year. A farmer in central Indiana increased the size of his business by growing a few acres of tomatoes for canning.

*Second.* Adding more livestock, sometimes beyond the point that the farm itself will support them. A farmer in central Indiana increased the size of his business by feeding all the crops produced on his farm and \$657 worth of purchased feed. A dairy farmer in eastern Pennsylvania increased the size of his business by adding a few more good cows and buying feed in addition to what he could raise.

*Third.* Doing work outside the farm. A farmer in the hills of southeastern Ohio, who owned a limited amount of land, increased the size of his business by doing some team work in oil fields, and another increased his by working on the roads.

There is usually an opportunity in every locality for many of the farmers whose business is very small to increase it to a size large enough to expect a fair return for the farmer and his family.



## LESSON 4. *Crop Yields per Acre*

H. W. HAWTHORNE

**R**ESULTS from several localities in the United States have shown that the one-third of the farms in each locality, with the best crop yields per acre, has averaged almost four times as large labor incomes as the one-third with the poorest yields. Comparisons of this sort are all the more striking when made for localities where the sales of crops make up the greater part of the income. In such localities the average incomes from the farms with the best crop yields per acre were more than six times as much as from the farms with the poorest yields.

An 80-acre farmer in central Indiana, who averaged 50 bushels of corn, 45 bushels of oats, and 20 bushels of wheat per acre, made an eight-year average labor income of \$556. Another 80-acre farmer in the

same locality who averaged 40 bushels of corn, 40 bushels of oats, and 15 bushels of wheat made an average labor income of \$121 during the same period; the better yielding farm made an eight-year average of 10 bushels more of corn, 5 bushels of oats, and 5 bushels of wheat.

In Sumter County, Ga., in 1913, when cotton sold around 12 cents per pound, there was a farm of 100 acres of tilled land with a rather low yield of cotton that returned a labor income of \$310, and one of about the same size with a good yield returned \$1,123. In 1918, when cotton sold for almost 30 cents, a low-yielding farm returned a labor income of \$337; a good yielding farm returned \$2,563. But in 1924, when cotton sold around 20 cents per pound, and the cost of production was much higher than in 1913 or 1918, a low-yielding farm lacked \$384 of returning a labor income, whereas a good-yielding farm returned \$600. In 1918, when the prices of cotton were much higher than in 1913, the low-yielding farms made but little more than in 1913, whereas the high-yielding farms made more than twice as much as in 1913; and in 1924, when costs were high, the low-yielding farms could not make a profit, whereas the high-yielding farms did fairly well.

### *Making Yields Count*

Although it holds true for all localities that the farms with the best crop yields average higher incomes than do those with the poorer yields, it does not follow that all farms with high yields return good incomes, nor that all farms with low yields return poor incomes. Studies of a large number of farms, by the United States Department of Agriculture, showed that 22 per cent of the farms with high crop yields returned poor labor incomes and 11 per cent of those with low crop yields had good incomes. Some farmers make fairly good profits with low yields because some other phases of the business are sufficiently developed to offset the low yields. But doubtless these same farmers could make more money with higher yields.

A dairy farmer in Wisconsin, whose crop yields per acre were 16 per cent lower than the average, made a labor income of \$529 per year over a period of five years, whereas his neighbors with low yields averaged \$266. This farmer had good cows, and he fed and cared for them so well that their annual production averaged 15 per cent above that of the locality and more than offset the low crop yields.

On the other hand, some farmers do not make good profits with high yields either because some other phases of the business are poorly developed, or because the higher yields are obtained at too great an expense to result in farm profits.

An illustration of farmers with high crop yields per acre who do not make money because some other phases of their business are poorly developed is furnished from the seven-year record of the business on a farm in the hills of southeastern Ohio. The yield of crops on this farm was 15 per cent above the average of the locality for the seven-year period, the yield of corn was 53 bushels per acre, while the average of the neighborhood was 41 bushels. One year this farm made 75 bushels per acre, while neighboring farms made 52 bushels. But there were only 3 acres of corn that year, whereas neighboring farms averaged 10 acres.

For the seven years there was an average of 8 acres of corn on this farm and 11 acres on neighboring farms. The livestock production per animal was about average on this farm, but there were only 2 cows, 1 sheep, 100 chickens, and 2 work animals; on the neighboring farms there was an average of 4 cows, 15 sheep, a brood sow, 135 chickens, and 3 work animals. There were only 21 acres of crops on this farm; there was an average of 44 acres on neighboring farms. This resulted in only 17 acres of crops per man and 11 per horse, whereas neighboring farms averaged 30 acres of crops per man and 17 per horse. With the high crop yields and fair livestock production per animal, but with a small business, when measured by the acreage of crops and the amount of livestock, and with low labor efficiency when measured by crop acres per man and per horse, the seven-year average labor income on this farm was \$137, whereas that of the neighboring farms with good crop yields per acre was \$583.

### *High Costs Cut Returns*

An illustration of farms with high yields per acre, but not returning good incomes because of too high costs, is found in the Palouse country of Idaho and Washington. Here wheat is the principal crop grown, and the sales of wheat furnish the main source of the farm receipts. Take two certain farms out there, each about the average size of the farms in the locality. In 1919 the yield of wheat on each of these two farms was 5 bushels more per acre than the average yield of the locality. Each of the farms had about the same acreage of land in wheat which sold at about the same price per bushel. One of the farms returned a labor income of \$4,062 and the other \$688.

The greater part of the difference in incomes from these two farms was due to differences in cost—too high costs per acre and per bushel of wheat on the second farm. The cost of producing wheat on the high-income farm in 1919 was \$1.50 per bushel, and that on the low-income farm \$1.87—a difference of 37 cents per bushel in favor of the high-income farm. The main part of this difference was in the costs of man labor, horse work, and machinery.

Labor incomes as a rule go up as crop yields per acre increase, but it must be remembered that other factors of the business may not be well enough developed to give profits corresponding with the increased yields.



## *LESSON 5 . Livestock Returns Per Animal in Relation to Farm Income*

H. W. HAWTHORNE

**R**ESULTS from several localities in the United States have shown that the one-third of the farms in each locality, with the best livestock returns per animal, have averaged more than five times as large labor incomes as did the one-third with the poorest returns per animal. In those localities in which practically all of the farm receipts were obtained from sales of livestock and its products, the one-third of the farms with best returns per animal averaged twenty

times as large labor incomes as did the one-third with poorest returns per animal.

The factor livestock returns per animal involves such questions as the breeding, feeding, and care of livestock, but it is not the purpose of this lesson to take up these phases which more properly belong to the Bureau of Animal Industry, but rather to consider the importance of good livestock returns per animal as it affects the success of the entire farm business. In every one of the many livestock localities from which data are available, there are numerous examples to show that the better the livestock returns per animal the greater the income from the business. A few of these examples, each for an important type of livestock farming, follow:

In a dairy-farming locality in Wisconsin the five-year average labor income from one of the farms, with good livestock returns per animal, was \$1,106; that from one with about average livestock returns was \$406; and from one with poor returns \$39.

In a locality in Indiana, where hogs are the principal source of receipts, the seven-year average labor income from one of the farms with good livestock returns per animal was \$1,407; that from one with average returns was \$400; and from one with poor returns \$28.

In a locality in the hill land of southeastern Ohio, where beef cattle, sheep and wool, and poultry and eggs are all important sources of farm receipts, the seven-year average labor income from a farm with good livestock returns per animal was \$722; that from a farm with about average returns was \$201; and from one with poor returns \$44.

### *One Chance in Ten*

There are occasional exceptions to the rule that the better the livestock returns per animal the greater the income from the farm business. From the data for several localities, 1 farm in 20 with good returns per animal has a low labor income and 1 farm in 10 with poor returns per animal has a high labor income.

The 1 chance in 10 of a farm with poor livestock returns per animal returning a good income is illustrated from the seven-year record of a dairy farmer in Wisconsin who had good crop yields per acre, low labor cost, and sometimes was able to sell surplus crop production at good prices.

One of the reasons for farms with good livestock returns per animal returning low labor incomes is that other phases of the business are so weak that on the whole a low income results.

The seven years' records from two farms in central Indiana with good livestock returns per animal, but with low incomes, will illustrate this reason. One of the farms had a small-sized business, just about one-fourth as much land and one-fourth as much livestock as the average of the better-paying farms of the neighborhood. For seven years this farm averaged \$310 in labor income, whereas 33 neighboring farms with good livestock returns per animal averaged \$995. The other farm with good livestock returns per animal but with low income had about one-half as much land and one-half as much livestock as the average of

the better-paying farms of the neighborhood, and the crop yields per acre were much lower than the average for the locality. For the seven years this farm lacked \$20 of returning a labor income.

### *Watch Labor and Feed Costs*

Another reason for good livestock returns with low incomes is that the cost of production of livestock or of the livestock product is uneconomical; that is, for some reason the costs are too high for the returns received. The labor is inefficient, or the livestock is not fed economically, or other items of cost are too high.

An illustration is furnished from the record of a dairy farm in east Tennessee for 1926. The farm had much above average production of milk per cow, for the locality, and received around the average price; but both the expense for hired labor and for feed were much higher than for neighboring farms with good production per cow. The value of the labor on this farm was 34 cents for each dollar of receipts, whereas that on a neighboring farm was 26 cents. The value of the feed for the livestock on this farm was 66 cents for each dollar of receipts; that on the neighboring farm was 46 cents. The farm lacked \$438 of returning a labor income in 1926, whereas the neighboring farm returned \$1,153—a difference of almost \$1,600.

Thus, even with good livestock production per animal, an eye must always be kept on the costs of production to see that the high production is not obtained at costs too high to result in farm profits.



## LESSON 6 . *Efficiency in the Use of Labor*

H. W. HAWTHORNE

**R**ESULTS from a number of studies in several localities of the United States have shown that the one-third of the farms in each locality which were most efficient in the use of labor averaged more than two and one-half times as large labor incomes as the one-third which were least efficient.

The exceedingly diverse nature of farm operations makes wide opportunity for inefficiency to enter into their performance. In a modern factory a man is expected to do a certain amount of work, and often the machine sets the pace for him. Generally, the worker on the farm must set his own pace. At certain times he must work under adverse weather conditions. Some work must be devoted to things which add little or nothing to the profits. One man takes twice as much time to do a certain kind of work as another man. Work may be so arranged that a given amount of effort accomplishes more than the average.

Efficiency in the use of labor for comparative purposes is frequently measured in terms of crop acres per man, which is a satisfactory measure, providing the farms are of the same general type. If farms vary in type, a good measure is the number of days of productive labor

per man. Aside from type of farming, some other factors, like topography and size of farm, cause variations in the number of crop acres per man. In a locality in the hills of southeastern Ohio there was an average of only 30 crop acres per man; whereas in a locality in Indiana, where the land is rolling to level, there was an average of 56 acres per man, and in a locality in Iowa, where the land is more level and the farms larger, there was an average of 78 crop acres per man. For this reason comparisons of farms on the basis of crop acres per man should be made only for farms in the same general locality.

### *Dividends from Efficient Labor*

The next two examples illustrate how incomes increase as the number of crop acres per man increases:

A farm in the hill land of southeastern Ohio, with about 40 crop acres per man but has a low income, or one that is low in crop acres per man 30 acres per man, \$303; and one with 20 acres, \$198.

A farm in central Indiana, with about 80 crop acres per man, returned a seven-year average labor income of \$1,280; one with 60 acres per man, \$972; and one with around 40 acres, \$793.

There are exceptions to the rule that income increases as crop acres per man increase. We sometimes find a farm that is high in crop acres per man but has a low income, or one that is low in crop acres per man but has a high income. These occur because other things do not remain the same from farm to farm, and high labor efficiency may be more than offset by some of the other factors; on the other hand, an occasional farm that is low in labor efficiency will have a good income in spite of the labor inefficiency, because other factors are well enough developed to overcome the lack of efficiency in labor.

This factor is especially important during the recent years of high labor costs, and for this reason it has been demanding more attention by many farmers than it did during the years when labor was much cheaper than at present.

In order to increase their labor efficiency some farmers in many sections are shifting toward larger farm units, which give opportunity to increase the gross returns without a corresponding increase in the outlay for labor and equipment. In every region farmers are found who are introducing minor enterprises, or giving more attention to them, in order to round out the labor program and to use nonmarketable feeds and other resources which otherwise have no value.

For instance, throughout the Northeastern States an increasing number of farmers are growing a few acres of potatoes as a side line to dairy farming. In the South an increasing number are growing a few acres of truck crops as a side line to cotton production. In the Great Plains more farmers are keeping a few milk cows as a supplementary enterprise on grain farms.

### *How Farmers Increase Labor Efficiency*

To make the ways in which some farmers are increasing their labor efficiency more concrete, a few examples follow:

There are two 160-acre farms near each other in a locality in east Tennessee. They are being farmed under much the same conditions.

They have the same type of farming, for they produce corn, wheat, barley, and hay. They are both dairy farms, with 15 to 18 cows, and both are selling fluid milk. In 1926 one of the farms returned a labor income of \$1,153, whereas the other lacked \$438 of returning any labor income.

The first farm accomplished just a little less than the second in the amount of commercial agricultural production, but the first farm expended only \$912 for labor, whereas the second farm expended \$1,381. The labor cost for each dollar of receipts, from the first farm, figures out 26 cents and from the second farm, 34 cents. There was a tractor, an auto truck, and a milking machine on the first farm; on the second farm there were none of these, and a good price was paid to some one else for hauling the milk. It is not claimed that all the difference in incomes from these two farms was entirely due to labor efficiency, but this factor represents an important part of the difference.

A farmer in the hill land of southeastern Ohio rearranged the fields in his farm and converted the two crop fields farthest from the buildings into permanent pasture. By the rearrangement he figures that he saves about 40 hours per year in going and hauling to and from the former distant crop fields, and that this time devoted to the present crop land gives higher yields per acre. He grows more feed on the present 42 acres of crop land than he formerly did on 56 acres, and has more pasture land. In working out this change nearly 400 rods of fence were eliminated.

On a sheep farm in an irrigated locality in Idaho 500 acres of alfalfa are cut three times annually. In 1925 the haying crew consisted of 14 men, who worked about eight hours per day. For cutting, five mowers were used and two sulky rakes followed directly behind the mowers. After the hay was raked into windrows, seven men put the green hay into cocks. This crew cut, raked, and cocked about 40 acres of hay daily. In 1926 certain changes were made in the raking and cocking crew which lowered the cost of haying and still maintained the same high quality of hay. The same five mowers were used. Two side-delivery rakes, in place of the sulky rakes, followed about a half a day behind the mowers; one went around the field in the same direction as the mowers and the other in the opposite direction, thus throwing one windrow on top of the other. The hay in the windrows was then bunched by one sulky rake, thus avoiding the use of hand cockers. In other words, two men with side-delivery rakes and one man with a sulky rake did the work that formerly required seven hand cockers and two sulky rakes to do, thus saving six men, or \$24 per day.

### *Farming Efficiently in Idaho*

In a locality of irrigated hay and potato farms, in the Yakima Valley of Washington, there is a 40-acre farmer who uses his labor more efficiently than do many of his 40-acre neighbors. He has brought this about in two ways:

1. By handling livestock along with his crop work, thus providing productive employment for labor, which otherwise would have been idle part of the year.

2. By substituting, for part of the hay and potato land, other crops on which the work comes at a time when the attention demanded by hay and potatoes is not so urgent, thus giving a better distribution of labor.

On this farm rye invariably follows potatoes and rutabagas for cow pasture during the winter and early summer. This farmer kept 6 cows, 250 chickens, and 8 turkey hens, while his 40-acre neighbors averaged 3 cows, 55 chickens, and 1 turkey hen. If he had followed the livestock practice of the crop farmers in the locality and kept only one cow and a few chickens to furnish products for family use, his net receipts would have been about \$750 less than they were. The livestock provides not only productive employment for labor which otherwise would be idle part of the year, but furnishes an outlet for low-grade and unmarketable feeds, and for the pastures that occur in the production of alfalfa, potatoes, and other cash crops. Moreover, it is a factor in obtaining good crop yields per acre and aids in stabilizing the income which, for some years, has been uncertain in this locality on account of sharp fluctuations in prices of alfalfa and potatoes. Records from several farms in this locality for two years show that the crop sales from this farm were about as much as from the average 40-acre farm, and the sales of livestock, cream, and eggs were about \$800 more.

Especial emphasis should be placed upon the fact that many farmers in nearly every locality have the opportunity to increase their labor efficiency by having the work so well planned that, barring weather conditions, operations may be done on time. A few days' delay in cultivating the cornfield often makes a marked difference in the amount of work necessary later on, or, if neglected, it makes a marked difference in the yield of the crop. When the binder or mower has not been made ready for the harvest in advance, delays and loss of valuable time often result.



## LESSON 7. *Farm Layout*

H. W. HAWTHORNE

**I**N TRAVELING about our country any observer is impressed with the variety of sizes and shapes of the fields in the farms. He often sees small and large fields on the same farm, and they may be square, oblong, and irregular in shape. If he observes closely he sees reasons for some of these variations; if he makes inquiry he finds good reasons for more of them. Aside from these there are many variations in the size and shape of fields for which there seems to be no good reason.

Farm layout, or the arrangement of a farm in fields, plays a part in the efficiency of labor and motive power; in the use of modern and larger machinery; in the economy of fencing and of land; and through these channels affects the returns from the farm business.

Some of the main points involved in a good farm layout are size and shape of fields, and distance and accessibility from the farm buildings. Large fields, rectangular in shape, from one and one-half to three times as long as they are wide, and all cornering near the farm buildings represent the best arrangement. Large, rectangular-shaped fields have

an important effect on the economical use of labor, fencing, and land; and fields which corner near the buildings save labor in going to and from fields, make fewer lanes necessary, and facilitate the care of the livestock.

### *Small, Irregular Fields Make Work*

Some figures from studies in Ohio and New York illustrate the comparative amounts of labor used, per acre, on small and large fields. In Ohio, records of the amount of labor used in producing corn on 108 fields show that 86 per cent more man labor and 31 per cent more horse work were used per acre on fields of 5 acres or less than on fields of over 15 acres. In New York, records of the amount of labor used in performing several field operations show that, for plowing, 33 per cent more man labor and 20 per cent more horse work were used per acre on fields of less than 5 acres than on those of over 15 acres; for rolling, 54 per cent more man labor and 53 per cent more horse work; for drilling, 40 per cent more man labor and 40 per cent more horse work; and for cutting with a grain binder, 36 per cent more man labor and 19 per cent more horse work.

In the Ohio study the average amount of man labor used in producing an acre of corn was 14 per cent more on irregular-shaped fields than on rectangular fields, and that of horse work 16 per cent more. In New York, records were kept on the time used to plow three fields; two were of the same size and were rectangular (about two and one-half times as long as wide) and the other was triangular with two of the sides nearly the same length. The average time used to plow an acre in the first rectangular field, which was plowed lengthwise, was 5 hours 37 minutes; in the second rectangular field, which was plowed crosswise, 6 hours 24 minutes; and in the triangular field 6 hours 52 minutes. Thus 22 per cent more time was used to plow an acre in the triangular field than in the rectangular field, plowed lengthwise.

With fields of a constant shape, the larger the field the fewer rods of fence to the acre are required to inclose it and the smaller the proportion of land wasted by fences. If a square field of 1 acre is fenced, about 50 rods are required to inclose it. If a square field of 10 acres is fenced, only 16 rods to the acre are required to inclose it, while only 8 rods of fence to the acre are required to inclose a square field of 40 acres.

If the width of the land occupied by fences in the three fields were uniform, the amount of waste land to the acre would be twice as much in the 10-acre field as in the 40-acre field, and more than six times as much in the 1-acre field as in the 40-acre field. In a study in New York the fields containing less than 4 acres averaged 37 rods of fence per acre; those containing from 8 to 12 acres, 17 rods; and those containing over 24 acres required only 9 rods of fence per acre. With the small fields nearly 5 acres out of 100 were occupied by fences; with the medium-sized fields, about 2½ acres; with the large fields, only about 1 acre out of 100 was occupied with fences.

### *Travel on the Farm Wastes Time*

Travel between barns and crop fields is not directly productive work. It is merely getting ready to do something. Some crops require more trips to the field during a season than others. It was found, in a

locality in New York, that for a five-year rotation of corn, oats, wheat, and hay for two years an average of six annual trips per acre was made in producing and harvesting the crops. A field that was half a mile from the buildings required 6 miles of travel per acre, or about two hours' time per acre annually to go to and from the field.

This discussion has pointed out some of the principles underlying ideal arrangement of fields in a farm layout. In practice it is difficult to reach the ideal. On some farms it may be more nearly approached than on others. Sometimes the best that can be done is far from ideal. The size of the farm, the lay of the land, and the type of farming are main factors in limiting the size and shape of the fields.

Small farms can not be arranged into large fields, and sometimes large, uniform-sized, and well-shaped fields can not be arranged on hilly and rough farms. If only one or two kinds of crops are grown on a farm, larger fields can be arranged than when several kinds are grown. There is a farm here and another there which seem to have the best layout that can be made when all of the conditions are considered; but there are a great many farms in the country which have field arrangements that could readily be improved. All changes should not be made at once. After thoroughly working out a plan of layout, changes can be made from time to time and always in the direction of the plan.

An example of a change in the arrangement of the fields is found in an 80-acre farm in central Indiana. This farm contained a field of 8 acres in alfalfa near the buildings and one of 5 acres in permanent pasture. Four larger fields, of 13, 14, 17, and 18 acres, were used in the crop rotation. The farmer recognized the handicap he was working under in trying to follow a three-year rotation on the four fields, so he worked out a plan by which he converted the four fields into three fields of 20, 21, and 21 acres. This was done by making the former 17 and 18 acre fields a little larger and by converting what was left of the 13 and 14 acre fields into one 21-acre field. This rearrangement suited his crop rotation better and saved 43 rods of fencing. It also eliminated two fields that were nearly square in shape and substituted for them a rectangular field that was about twice as long as wide.



## LESSON 8 . *The Farm Budget*

J. B. HUTSON

**T**HE WORD "BUDGET" usually means a plan for future using or spending. In farming, budget means a plan for the use of land, man labor, horse work, equipment, and other resources that the farmer has to work with. It includes the plan for the system of farming for the coming year. It is a carefully worked-out estimate of how well a particular combination of crops, or combination of crops and livestock, will pay. It should show the number of acres of the different crops, the number of head of the different kinds of livestock, the expected crop and livestock production, the expected feed requirements, the cash expenses, and receipts for the particular system contemplated.

First, the acreages of the different crops contemplated, and the crop production that appears probable, should be recorded. The next step is to estimate how much of the production of the different crops will be needed in the home, how much fed to livestock, and how much sold. Then the number and kind of livestock to be kept should be indicated. Next, the feed requirements for these livestock should be recorded.

### *Balancing Feed Stocks and Requirements*

At this point it will usually be advisable to compare the data that show the feeds on hand at the beginning of the year and crops to be grown for feed with the data that show the expected feed requirements. Generally, before a cropping program and livestock program are finally decided upon, adjustments will need to be made, first in one and then in the other, until a livestock program is found that is adapted to a particular cropping program. When the kind and numbers of livestock contemplated have been recorded, the quantities of the livestock and livestock products expected to be used in the home and sold should be indicated.

The expected value of the crop and livestock products to be sold, and the expected cost of the purchased feeds, seeds, fertilizers, and other materials should then be indicated. Next, these expected expenses and receipts should be brought together. In addition to the direct costs for crops and livestock, estimates should be included on the expense side for labor, new machinery and repair, new fences and fence repair, building repair, taxes, farm insurance, and other overhead items.

December, January, February, and in some sections March are the budget-making months in most parts of the country. These are the months when the farmer generally has time to do close thinking. When the crops are harvested the farmer can usually find time to take stock, review the successes and failures of the past season, compare the results actually obtained with those expected at the beginning of the year, and make a budget for the coming year.

### *Information Needed for Budget-Making*

The information needed in making the budget may be divided into two classes—that relating to prices and that relating to production. Before a budget can be completed, judgments must be formed as to the prices that will probably prevail for the products to be sold, and expense items and the crop yields and livestock production that will probably result from different practices.

Before the prices to be used in making the budget are decided upon, as much time as possible should be given to the study of average prices, price trends, and the present price situation. Studies made by others should be reviewed. Care should be exercised lest too much weight be given to the prices of the present or of the immediate past. It should be remembered that prices of farm products fluctuate widely from year to year and that the changes are seldom uniform.

The Yearbooks of the United States Department of Agriculture carry data which show prices that have been received for the principal farm products and expense items for a period of years. The Agricultural Situation is issued monthly by the United States Department of Agriculture and carries the general résumé of conditions throughout the country with

special reports from time to time for particular sections or commodities. It also carries data showing price trends during the past few years.

Crops and Markets, a monthly publication issued by the United States Department of Agriculture, carries information as to the acreage of crops planted and harvested, the condition of these crops during the year, the number of the different classes of livestock on farms, the quantities of different products marketed and on hand, and other related data on crop and livestock production and prices. Foreign Crops and Markets, a weekly publication issued by the United States Department of Agriculture, carries information as to the conditions of crops and livestock produced in foreign countries that compete with crops and livestock produced in the United States.

The Outlook Reports, issued by the United States Department of Agriculture and some of the colleges of agriculture, discuss the probable trends in prices during the coming year for each of the principal farm commodities. The Federal Outlook Report is followed by an Intentions-to-Plant Report, which carries information as to farmers' planting intentions for the principal crops. Reports showing farmers' hog-breeding intentions are issued in June and December. Similar reports are issued from time to time for other classes of livestock and crops.

### *Specialized Information Available*

In recent years the United States Department of Agriculture and some of the State colleges of agriculture have undertaken careful studies of the factors affecting the prices of specific farm commodities and a thorough-going analysis of conditions confronting producers of certain commodities. Bulletins are available showing the results of these studies.

In the case of crops, an effort should be made to find out the yields that may reasonably be expected from different quantities of seed and fertilizer and the quantities of these and other material requirements that will probably result in the largest returns in the light of conditions on the farm, and prices that may reasonably be expected. In the case of livestock an effort should be made to determine the production that may reasonably be expected to result from different rations, and the particular ration that will result in the largest returns, considering the home-grown feeds and pasturage available and the prices expected for feeds, livestock, and livestock products.

Records showing the results that have been obtained on one's own farm, and on other farms in the community, from different fertilizer and cultivation practices for crops, and from feeding practices for livestock, are extremely useful in forming judgments as to crop and livestock production that may be expected. Such records should be supplemented with bulletins showing the results of experimental work undertaken by the United States Department of Agriculture and the State experiment stations.

A careful study of production information, such as that described above, will provide a basis for conclusions as to the crop yields that are most likely to be obtained, the quantities of the different kinds of feeds normally required to produce 100 pounds of pork or to put 100 pounds of gain on steers, or to keep a cow or a horse a year. A similar study of the information mentioned, and such other information as may be

available regarding prices, will provide a basis for conclusions as to the prices that are most likely to prevail during the coming year and the years just ahead.

### *Planning on the Basis of Budgets*

The purpose of working out a farm budget is to find the crops and livestock best adapted to the farm and conditions at the time. Generally this will mean comparisons between the system that is being followed at present and other systems. First, the budget should be worked out for the system that is being followed at present. Next, one should look about in his own community for combinations of crops and livestock that appear to be giving good results on other farms. Budgets should be worked out for such of these systems as seems practicable in the light of conditions on the farm.

The budgets worked out in this way should be compared. In comparing the budgets of the different systems, each should be considered critically for the purpose of determining how well the principal crops are adapted to the area, the effect of each system upon the fertility of the soil, the kinds of markets that are available for each of the products to be sold, how nearly the feed crops provide a balanced ration for the livestock if the system includes livestock, how well the crops and livestock fit together, and how well the nonmarketable products, such as pasture, straw, stover, skim milk, etc., are utilized with each. With these facts in mind, together with the returns that may reasonably be expected from each, one of the systems should be selected as the system to be followed.

In a manner similar to that described budgets may be used in making plans for the coming year. In the case of plans for the coming year the prices expected during the coming year should be used, whereas in the case of the system of farming on long-time plan the average prices expected considering a period of years should be used.



## LESSON 9 . *Outlook Reports*

J. B. HUTSON

**T**HE BUREAU OF AGRICULTURAL ECONOMICS issues, from time to time, outlook reports which are designed to give farmers information as to what the probable market conditions will be when the products of the farm are ready to sell. An effort is made to make this information available to farmers before planting or breeding season or before the time for buying livestock to feed.

In January of each year a comprehensive report is prepared which covers the outlook for all the commodities on which sufficient information is available. Each summer special reports on the outlook for hogs, sheep, and cattle are prepared; and each fall a report on the outlook for wheat production is issued just prior to the time of planting winter wheat.

The general report on the agricultural outlook for 1926, for example, issued in January, contained statements on 31 different commodities in

addition to statements on the domestic and foreign demand situation, agricultural credit, and farm labor and equipment. The outlook on each commodity summarizes all available information which will be of assistance to producers in planning their production programs and balancing their different lines of production so as to obtain the greatest returns and avoid as far as possible the overproduction or underproduction of any commodity.

### *Preparation of Outlook Reports*

The outlook reports for the various agricultural products are prepared by committees. A committee composed of specialists in the Department of Agriculture, studying the production and the domestic and foreign marketing of a particular commodity, assembles all available information on the present supply of the product and the demand for it and on the trends of production and consumption. After a careful study of this information a conclusion is formulated as to the outlook for the production of this commodity during the coming year.

For example, in the case of tobacco, the quantities of the different types of tobacco on hand as compared with previous years, the production during the past year as compared with previous years, developments in producing areas in foreign countries, changes in the tastes and habits of consumers, both in the United States and foreign countries, are factors considered.

The outlook for one commodity sometimes depends to some extent upon the outlook for other commodities. In the case of a feed crop such as corn, the probable numbers of hogs, beef cattle, dairy cows, and other livestock that will probably be on hand when the corn crop, not yet planted, is matured and ready for consumption, are taken into account. Consideration is also given to the fact that oats, barley, and other feed crops can be used as a partial substitute for corn. If corn should be scarce and high in price, while the supplies of other feed crops are plentiful, livestock producers who must buy feed will use less corn. Likewise in arriving at a sound judgment as to the outlook for livestock production, the prospective supply of feeds is considered. Because of these relations the reports for the different commodities are compared before any are completed.

Outlook reports are distributed by means of press releases, talks, and special reports. The newspapers of the country are furnished a condensed summary of each of these reports. The complete reports are printed as soon as prepared and may be obtained upon request.

In recent years representatives of the State colleges of agriculture and of the agricultural experiment stations have come to Washington and assisted in the preparation of the January reports. These State workers then prepare State outlook reports based upon the Federal reports and upon other data of local significance. These reports, as well as the Federal reports, are then disseminated by the extension agencies in the States.

### *Using Outlook Reports*

Outlook information indicates the trends that prices are likely to take during the year. A careful study of such information should help a farmer to have the largest quantities of the different farm products to sell at the time they are relatively highest in price, and to have the smallest quantities at the time they are relatively lowest in price.

For example, a farmer in the spring-wheat area may have a field that can be planted either in barley or in wheat. The supplies of barley and wheat being carried over from the previous year, the probable demand for barley as a feed for livestock, the indications for wheat production in foreign countries, and industrial conditions in the United States and in foreign countries may be such as to indicate a more favorable outlook for barley prices than for wheat prices. Under such conditions the farmer would find it advisable to plant the field in barley instead of wheat.

Or a farmer in western Kentucky may be undecided whether to plant a field in strawberries or tobacco. The acreage of strawberries that has been planted in the areas that would market at the same time that his berries would be ready for harvest, and the probable industrial condition in the cities may be such as to indicate a favorable price outlook for strawberries, whereas the supplies of tobacco in the warehouses and storerooms of the world, the probable production of a similar type of tobacco in other sections of this country and in foreign countries, and tendencies in the habits and preferences of tobacco users may be such as to indicate a relatively unfavorable price outlook for tobacco. Under such conditions the western Kentucky farmer might find it advisable to plant at least a part of his usual tobacco acreage in strawberries.

Or a farmer in the Corn Belt may be debating whether to breed more sows or to sell part of his corn for cash. The place stage of the hog cycle, the number of sows in the Corn Belt or being bred by other farmers, the carry-over of corn from the previous year, and the prospective demand for corn for feed for other livestock, and other conditions may be such as to indicate more favorable prices for hogs than for corn. After a consideration of such facts the Corn-Belt farmer would probably decide to breed more sows and plan to sell less corn, and he would probably increase his profits for the year by so doing.

### *The Why of Outlook Reports*

These are the kind of problems that farmers in all parts of the country are facing all the time. The profits in farming depend to a considerable extent upon the decisions reached in regard to them. It is a laborious and expensive process to bring together all the facts that have a bearing on such problems, and few farmers are so situated that they can do it for themselves. It would be more practical for some central agency to do it for him, even if the farmer had to pay directly for the service.

The department has been issuing outlook reports for several years. Even the first reports were surprisingly accurate; in about five times out of six conditions worked out as was expected. With increasing

experience the outlook reports have been made more accurate, the "batting average" in recent years having ranged between 90 and 95 per cent. It will never be possible to anticipate all future changes in markets, but the outlook reports do give farmers an insight on the future market trends, which is far superior to any mere "rule-of-thumb" conclusion.

Outlook reports are prepared for the sole purpose of helping the farmer with his price problems. They carry information and conclusions that farmers all over the country say are helpful in deciding upon the profitable course to follow.



## LESSON 10. *How Farm Returns Vary in the United States*

S. W. MENDUM

IT IS ALWAYS INTERESTING to know how things turn out. In the previous lessons of this series we have been looking at particular factors of the farm business with a view to their effect on results. These were only part of the factors that the successful farmer must keep in mind and combine into a smoothly working business unit. This lesson presents some of the results of the very complicated interplay of conflicting forces as reported to the Department of Agriculture by farm owners who operated their own farms in 1924, 1925, and 1926. We have no such figures for 1927 as yet.

The financial results of farming vary widely. Farmers want them to vary; they try hard to arrange their production programs each year so that they will have more money to show for their year's work. The trouble is that, besides the changes farmers want, other changes that they do not want and can not anticipate are forced upon them.

There must be about 6,000,000 different results each year. No farmer is likely to have quite the same income in successive years, or if he does happen to close out the year with the same income as the year before, it is more than likely to be the result of a different combination of circumstances. Among the 15,000 farmers who report to the department there are considerable numbers who made within a few dollars of the same amount for the year, but these like financial results came about in very different ways.

### *Averages Must Be Interpreted*

Variation is the rule rather than the exception, and is back of every use of the word "average." It is practically necessary to talk in terms of averages, as a means of describing a group, but unless you and I think of the same group, and the variations within the group, we are almost certain to disagree as to what the averages mean.

Variation is wide. In the fall of 1926 there was a report in the papers that a potato grower in Maine had sold potatoes grown on his farm for

about \$340,000, and that these had cost him about \$260,000. That is not an official report, and it is way beyond most farmers, but it is not certain that it is anywhere near the top figure. Farmers do not talk so freely about their losses, but one report from a ranchman in the Southwest showed that he was nearly \$30,000 worse off at the end of 1926 than at the beginning, through failure of sales, and growth and prices of stock, to meet ranch expenses and keep up the ranch and stock. No doubt there were other large operators who fared worse. The "average" is somewhere between these cases. The general run, which is what many think of as "the average," seems to run just a little over an even break.

The Department of Agriculture had voluntary reports on farm returns from nearly 14,000 farmers for the calendar year 1926. Every State was represented with farms of all sizes from the smallest up, of all kinds common in the different parts of the country, and showing good, poor, and medium results. From these reports "net results" were computed for each farm, as the nearest to an income figure that the diversity of the reports permits, for purposes of comparison. This net result is defined as the difference between cash receipts and cash expenses for the farm business, plus increase in inventory of personal property, or minus decrease (if a decrease was shown, as it was in many cases). These reports show the variations in 1926, and are much like those for other years except on the low and the high sides.

### *Average Farm Incomes of 1926*

In 1926, 46 per cent of the reports from owner-farmers in the North Atlantic States fell between zero and \$1,000; 10.5 per cent fell below zero; and a little more than 2 per cent were above \$5,000. In the east North Central States 46 per cent of the net results were between zero and \$1,000, with 7 per cent below zero and only 1 per cent above \$5,000. In the west North Central States 36 per cent fell in the group zero to \$1,000, 14 per cent below zero, and 3 per cent above \$5,000. In the South Atlantic States 60 per cent of the net results were between zero and \$1,000, while nearly 20 per cent were below zero and only 0.5 per cent were above \$5,000. In the South Central States there was wider variation, but here again the concentration between zero and \$1,000 accounts for 56 per cent of the farms reporting, with 9 per cent below zero and 1.6 per cent above \$5,000. In the 11 Western States 6 per cent returned more than \$5,000, but 11 per cent did not make as much as zero and 36 per cent fell between zero and \$1,000. All put together, 48.5 per cent of the returns fell between zero and \$1,000; 11.5 per cent fell below zero; and 2.3 per cent above \$5,000. The difference between the highest and the lowest was \$63,300.

In 1925 the extreme difference reported was \$115,000, but 44.1 per cent were between zero and \$1,000, 3 per cent above \$5,000, and 9.4 below zero. In 1924 the extreme difference found was \$57,200, with 46.5 between zero and \$1,000, 2.7 per cent above \$5,000, and 10.6 per cent below zero.

The reasons for these differences are many and real, but that is another story.

# Radio Stations

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### Farm School Programs



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KFUM . . . . . Colorado Springs, Colo.	KFXD . . . . . Jerome, Idaho.
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# U. S. RADIO FARM SCHOOL

U. S. Department of Agriculture  
*Office of Information--Radio Service*

Farm Economics--Series 2

## MARKETING

December 14, 1927, to  
February 15, 1928

*By Specialists of the Bureau of  
Agricultural Economics*



## PREFACE



GREAT PROGRESS is being made in the marketing of farm products, although the problems that continue to arise make the subject more and more complex. No single system has yet been discovered that applies to all farm products, nor is there any simple approach to marketing. To improve marketing involves improvements all along the line in production to produce the product which the market will take, to produce the right varieties, to standardize them, properly pack and ship them, secure orderly distribution to consuming market, inspection, both at shipping point and at the market to maintain quality, sound financing, warehousing, and advertising. To improve each of these phases of marketing requires constant research and a wide collection and distribution of market news among both producers and the trade.

Washington, D. C.

Issued March, 1928

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## LESSON 1 . *The New Idea in Marketing*

J. CLYDE MARQUIS

IF THERE CAN BE SAID to be a new idea in marketing it is this: To adjust production to what consumers will take, or to what the market demands. This problem has come about because of highly developed specialization in production of many products—fruits, vegetables, livestock, etc.—in areas far removed from centers in large cities. The demand is the important consideration, for if demand slackens, production must also be adjusted; or a surplus appears and prices decline. Many changes are taking place in the consumption and use of various products, and producers must be informed of these changes in order that they may adjust production to changing demand. The new approach to the marketing question is through attempting to learn what the consumer wants and then passing this information back to producers, so that they will turn out a product which will move quickly at good prices in the market.

The Department of Agriculture is attempting to measure this demand through its surveys of consumer demand. These surveys consist in making a house-to-house canvass of families to learn their food preferences, kinds and qualities they desire of specified products, and the uses they make of these products. Surveys of this character have been made regarding meats, milk, and certain fruits and vegetables, such as apples, prunes, citrus fruits, raisins, and cranberries, and other more specialized products like honey.

### *Consumers Need Education*

The most comprehensive of these surveys related to meats. The department canvassed over 4,000 families in 16 cities and learned the preferences of consumers regarding different kinds of meat, such as

beef, pork, and mutton, and how these meats were used. This survey showed that consumers as a whole are not familiar with the qualities of various cuts of meat. In fact, many housewives are acquainted with only a few of the numerous cuts of meat that are available in nearly every shop. The survey indicated that there is a great field for popular education among consumers as to what constitutes quality in meat; and as to how they can buy certain cuts and use them most economically. It also indicated that beef is preferred in two-thirds of the households of American white people; and as the standard of income increases, preference for pork decreases and preference for lamb increases.

A similar survey relating to apples discloses the fact that many consumers have little or no knowledge of varieties; they buy apples for eating because they are red, and for cooking because they are green colored.

All of these consumer surveys have shown a need for teaching the consumer to recognize quality through advertising and other means, in order that products of the highest quality may bring prices in keeping with the greater cost of producing and handling them.

Similar surveys made through the wholesale and retail trade have given useful information on how best to select and prepare products for market, the seasons in which certain products are preferred, and what consumers are willing to pay for a higher-grade product as compared with one of a lower grade.

This type of survey is just in its beginning and must be used much more extensively to make it of value in improving marketing, but it illustrates the general problem of discovering what the consumer wants.

### *Quality Guaranties Pay*

Another outstanding change in marketing is the growing use of means of carrying quality guaranties with the product from the time it is produced until it reaches the consumer. For example, if butter of high quality is made and inspected at the creamery, the certificate of inspection is carried through with the package to the consumer, to show him that the butter was of a certain high quality when made. The organization which produces the butter takes pains to see that its quality is kept up to standard at all times. This expedites trade, stabilizes prices to some extent, and fosters consumption because it assures the consumer as to the quality of the product he is getting. This system demands that the methods of the producers be such that they handle their milk and cream properly before it goes into butter.

Eggs in some instances are now inspected and assorted so that a given brand has uniform quality of a certain standard. Some firms are now carrying evidence of this inspection through to the consumer. This system has been followed by fruit growers, particularly those who produce citrus fruits, and who wrap the fruit in a paper cover carrying the brand name.

To produce and maintain high-quality products such as are necessary to establish and hold a trade requires permanent and extensive organization. This is resulting in formation of associations of producers, with equipment to standardize, inspect, and pack their product in a

form that will carry it to the consumer in the best condition. Such improvements are not easy to make on a small scale, and the result is that community organization is necessary. Standards must be worked out carefully, followed by all of the producers of a product in a locality. The product must be assembled in quantities that can be sold effectively through established market channels. It means carloads rather than wagonloads of produce.

Federal and State agencies are helping in this work through the development of official standards which will be recognized in all markets and in all producing sections. This is also necessary in order to develop uniform market reporting, since it is next to impossible to quote prices on an endless variety of unstandardized produce. The development of standards will be described in detail in a later talk in this series, showing how it has increased at a very rapid rate during the last decade.

### *Inspection Grows Rapidly*

Another new phase of marketing of farm products is the organization of growers, mostly on a cooperative plan, to handle a volume of produce which will justify them having representatives in the principal markets who will by close contact with the trade keep the producer members informed as to the requirements of these markets. Much of this service is provided for producers in general through the Federal Market News Service, but producers can help themselves greatly by having their own representatives study the movement of their products.

Perhaps no single phase of marketing has developed more rapidly than inspection. Federal receiving-point inspectors are now maintained in 40 cities, and nearly 33,000 carloads of fruits and vegetables alone were inspected last year. At shipping points representatives of the department inspected nearly 200,000 cars of fruits and vegetables. Other inspection work covers poultry, eggs, butter, hay, beans, livestock, and meats.

We have learned that production and marketing are inseparable. To be able to offer to the consumer the kind and quality of fruit, dairy products, or meats that he wants, you must begin by adjusting farm production to turn out this sort of product. In the old days farmers hauled to the general market whatever surplus they had to sell and offered it direct to consumers, taking what they could get as a price. To-day marketing of farm products is a highly organized industry which does not bring the producer and consumer together, and much of the product is handled by persons who never see it, but who must depend upon distribution records to know what it is. This makes it of vital importance that the description of the goods be in terms that can be understood by all, so that there are fewer misunderstandings. The new marketing system, while doing away with some middlemen, is rather making use of the middleman's services in a better manner with less waste and a greater honesty in trading. The introduction of standards and inspection with the wide distribution of prices through the Market News Service, which keeps everyone informed on changes in the markets, is going a great way to remove evils in the trade, to promote honesty among buyers and sellers, and to reduce waste. The producer knows

better what price his product should bring, and the trader knows the quality of the product that he is to receive.

Improvement of marketing is not being brought about by any one outstanding factor, but by a combination of improvements in these many phases of the problem. We are approaching a period when a program of production and distribution is being developed for each commodity in each producing section. By the wide distribution of the facts of quantity, of production, its quality, shipments to market, stocks in storage, and the rate of consumption we are able to avoid to some extent serious overproduction, gluts in the market, and the consequent losses. All of this will take time to work out, but we are making rapid progress.



## LESSON 2 . *Standardization in Marketing*

C. B. SHERMAN

**T**HE DEVELOPMENT of national standards for farm products was a long, slow business until the World War. Getting them used by farmers and dealers was even slower work. But when the Food Administration ruled that because of transportation difficulties all potatoes that were shipped out of a State would have to be graded according to United States standards the farmers were forced to pay some attention. Then when the big slump in farm prices came after the war both the farmers and the trade turned to the use of standards, as they turned to everything else that looked promising, to help them out of their difficulties.

The Bureau of Agricultural Economics (then the Bureau of Markets) had been working along for five years getting standards ready for use, so the standardization specialists were ready with their recommendations when the demand came.

Now we have well-tested standards for practically every important farm product. The great staples—cotton, wool, grains of all kinds, hay, livestock, etc.—are provided for and so are the perishables. Standards for nearly 40 fruits and vegetables are in use; also standards for honey, eggs, and almost any other farm product you can mention.

Some of these standards are compulsory. Under specific laws passed by Congress the cotton standards are compulsory for cotton offered in future trading; the grain standards must be used when grain is shipped in interstate trade; certain of the fruit and vegetable containers are standardized by law, and if products are stored in warehouses that are licensed under the United States warehouse act and are stored under grade names, the grades used must be those promulgated by the United States Department of Agriculture.

All other standards are for voluntary use only, except that certain States have made the use of United States standards for certain products obligatory in those States.

### *Standards Are Tested*

Official standardized grades promulgated or formally recommended by the department have usually been subjected to extensive tests to determine their practicability under actual commercial conditions. The demand for grades for immediate use has frequently been met by issuing tentative grades which, although based on the best available information, have not been demonstrated practically. It is a commonplace among students of standardization as it applies to agricultural products that no grade developed under strictly laboratory methods will withstand the test of commercial usage with its thousand and one unusual or unforeseen demands. It is true that nowhere outside of the laboratory could certain grading practices be satisfactorily analyzed and reduced to descriptive language.

But, after all, the proof of the grade is in its adaptability to commercial use, where it may be tested not only in the light of the theoretical soundness of the specifications but as to the ability of business men and their employees to understand and put it into actual operation. In many instances, before standards have been promulgated by the department, public hearings have been held in various parts of the country at which representatives of the trade and others interested have been invited to make suggestions and criticisms. This has been notably true of the standards for cotton, grain, hay, livestock, meat, and wool.

Frequently more than one set of grades is provided for the same product in order to evaluate it properly for certain specific uses. For instance, a medium-sized apple of very attractive color is more acceptable to the purchaser of dessert fruit than a larger but poorly colored apple of the same variety, and therefore it grades higher for that purpose. The reverse would be true if the fruit were sold for canning purposes, where the cost of peeling is a consideration and color is not. If the apples were to be manufactured into vinegar, neither color nor size of themselves would affect value.

There are many reasons for standardization. We must have a common language as a basis for future contracts. This is particularly true in dealing in such commodities as cotton and grain, where future trading is now well organized on the basis of definite specifications. With such commodities as cotton linters, standard grades help to establish basic prices and differential quotations. With some other commodities, such as fruits and vegetables, a surprising amount of trading is still conducted on the basis of vague descriptions. This loose method of doing business has often resulted in endless disputes in the event of a material drop or rise in the market.

Clear and definite grades are indispensable in transactions through exchanges and in making telegraphic sales, sales in transit, or in any circumstances where the buyer can not exercise the privilege of inspection.

### *Grades and Market Prices*

Standard grades facilitate the settlement of claims. Claims against the railroad companies for losses in transit of agricultural products run into millions annually. To arrive at a basis of adjustment it is necessary to establish the value of the product and to correlate the reported market prices with the specific lot on which the claim is sought. It is necessary

to identify it in terms of standard grades. When evidence can be produced to show that a certain shipment was of grade United States No. 1, it is relatively easy to establish the prevailing price. The American cotton standards are now used practically throughout the world as the basis for arbitrating the disputes arising out of transactions in American cotton.

Standard grades are necessary to permit an intelligent comparison of market prices. One of the first demands on the Bureau of Markets, now the Bureau of Agricultural Economics, for Federal standards came at the time of the organization of the telegraphic market news service for fruits and vegetables. This service was scarcely under way before it became evident that growers and shippers had no way of knowing whether variations in prices in the reporting markets represented differences in the market demand or simply differences in the actual quality of the product.

In the development of standards for many important commodities the United States farm products inspection service has given invaluable aid by using the standards as a basis of official inspection both at shipping points and in the receiving markets. Using them at the shipping points has done much to acquaint farmers with them and to demonstrate to farmers the desirability of shipping their perishables under these standards that are recognized all along the line to market. As a result of this work farmers are learning more and more to sort their produce, and leave the poorer grades at home, shipping only the better grades for which there will be a demand at reasonable prices. Keeping the poor stock at home does much to keep up the tone of the market and stimulate demand. If a market is flooded with poor produce, the customers are likely to lose interest no matter how low the prices.

Standardization is especially important in cooperative marketing associations, for it affords a basis for pooling the products of various growers to enable all to share alike in the season's sales. It is inevitable in the ordinary course of business that there will be poor sales, damage in transit, bad accounts, rejections, and allowances. If certain growers are asked to bear the losses, while others, through no especial effort of their own, receive the benefit of the good sales and prompt settlements, there may easily develop a belief that the management is showing favoritism. But attempts to pool the products of the members without regard to variations in the grade have been uniformly unsuccessful.

### *Distribution Costs Reduced]*

Well-graded products make it possible to reduce distribution costs by eliminating waste, both economic and physical. For instance, the manufacturer now finds it unnecessary to order 10,000 pounds of wool to insure receiving 5,000 of the quality he requires.

Standardization is of fundamental importance in relation to such marketing functions as financing and advertising.

Warehousemen who operate under the provisions of the United States warehouse act are required to use official grades on the warehouse certificates if any grade is designated and if any have been established by the Government for the commodity in question. One purpose of the

warehouse act is to enable producers to make a freer use of receipts as collateral for loans. The banker's location may be distant from the point where the products are stored. His only means of ascertaining the value of the products is to have a statement of the quantity and the grade of the products which are to constitute the collateral. If these receipts are to be accepted by the banks on the most favorable terms to the borrower, they must be dependable. The best way to secure this dependability is to place responsibility back of the warehouseman, and then to require the warehouseman to conform to recognized standards.

The desirability of standard grades as a basis for advertising is obvious. Advertising is worse than futile unless backed up by uniformly dependable products.

The Bureau of Agricultural Economics feels that its standardization work has been one of its most promising and satisfactory lines of work. It has grown steadily in use and popularity, and many foreign countries are now taking an active interest in our work. Our cotton standards have been adopted by so many foreign exchanges that they are now the universal standards for American cotton, and agencies in many countries the world over are buying copies of our standards for both wool and cotton.



### LESSON 3 . *Official Inspection in Marketing*

FRANK GEORGE

**E**STABLISHMENT of national standards for farm products has been the forerunner of Federal and Federal-State inspection service, which has been a vital factor in improving marketing practices and effecting more efficient methods of merchandising farm products during the last 10 years. This inspection service has been made available at shipping points and receiving markets, so that either or both the shipper and receiver may obtain a Government or Government-State certificate of the quality of products involved in a transaction, the certificate being regarded as prima facie evidence in all Federal courts and some State courts.

The food products inspection service of the Department of Agriculture was established as a war-emergency service in November, 1917. The object of the service was to protect producers against unfair rejections by receivers, to obtain quick adjustment of differences between shippers and receivers so as to hasten the unloading of cars which were needed for continuous duty during the war emergency, and to prevent the waste of food incident to delays in handling resulting from differences between shippers and receivers.

At first the service was limited to the inspection of fruits and vegetables at receiving markets. It proved of such value in marketing that Congress gave authority to continue it after the war-time emergency, and in July, 1922, the service was extended to inspections at shipping points with a view to enabling shippers to correct improper grading practices while the product was still in their possession rather than

make adjustments after it had arrived in the receiving market. This shipping-point work is done largely in cooperation with the States under agreements which provide for the Federal licensing and supervision of State employees who are engaged in standardization and inspection work. Its popularity and practical value is shown by a steady increase in use, a total of 193,512 cars of fruits and vegetables being inspected at shipping points in 40 States during the fiscal year ended June 30, 1927.

Similar voluntary inspection service is available now on hay, butter, poultry, eggs, broomcorn, beans, and soy beans. Compulsory inspection of grain in interstate commerce is provided by the grain standards act which is administered by the department. The far-reaching effects of these services is shown in the higher quality of products in market channels, returns to producers on the basis of quality, and the establishment of better business ethics as between seller and buyer. An inspection certificate accompanying the retail pound of butter is a Government assurance of quality to the consumer. The Government stamp of quality on graded beef is a similar certificate of quality.

### *Poultry Inspection Grows*

The department's poultry and egg inspection service has been expanded recently so that in California and Missouri, where the egg-inspection service has been carried on in cooperation with the State departments of agriculture, the service has been extended to a number of additional shipping points in each State. Four firms at San Francisco and one at New York have been authorized to use certificates of quality for United State No. 1 extras (retail grade) on their carton eggs. During the spring months of 1927 more than 500 inspections of eggs were made monthly at New York. A cold-storage warehouse at Philadelphia also has used the inspection service to ascertain the quality of eggs offered for storage and on which loans were desired by use of the warehouse certificates as collateral.

Establishment of an inspection service on live poultry at New York City in cooperation with the New York Live Poultry Commission Merchants' Association and the Greater New York Live Poultry Chamber of Commerce is an important recent development. The service requires a personnel consisting of a supervising inspector and 12 licensed inspectors, 6 of whom are qualified veterinarians. This inspection service involves examination of nearly 12,000 carloads of poultry a year for crop and health conditions, and is made in accordance with rules and regulations promulgated by the Secretary of Agriculture. It is planned to extend inspection work on poultry to include dressed poultry, tentative grades for which are being formulated, and to eviscerated poultry intended for use in the preparation of canned poultry food products for export.

Butter-inspection service is in effect in Minnesota in cooperation with the Minnesota State Department of Agriculture, more than 80,000,000 pounds of butter having been inspected last year. This service has resulted in a marked improvement in the quality of butter manufactured by more than 400 creameries, the percentage of 93 score butter increasing

from 33 per cent in February, 1925, to over 70 per cent in February, 1927. A standard of requirements for butter making prepared by the supervising inspector in cooperation with the field men of the association of creameries has been accepted as a guide for quality improvement.

The hay-inspection organization now numbers nearly 100 licensed inspectors. Establishment of hay grades has led to a simultaneous demand for inspection on the basis of these grades, more than 17,000 inspections being made during the past year. Similar results have attended the establishment of inspection services on broomcorn, beans, and soy beans. The meat grading and stamping service, whereby carcass beef grading "Prime" and "Choice" may be stamped by Government inspectors is in an experimental stage, but is finding approval by a large part of the trade.

### *Inspectors Efficient in Work*

The requirements of a Government or Government-State inspector are a thorough knowledge of the Federal grades and standards in both theoretical and practical application, and practical experience in marketing the products. Enforcement of these requirements is reflected in the comparatively few reversals of original inspection certificates. In some instances the inspectors are licensed by the Federal-State service and placed under Government supervisors; in others they are employed by the States and licensed by the Federal Government; in others they are employees of the United States Department of Agriculture.

Only the high lights of the establishment, growth, and effectiveness of the inspection service can be touched upon in a short paper. It can not go into such details as the inspection of commodities for Government hospitals, the Army, the Navy, the laid-up fleet, the steamship lines, chain stores, and restaurants. The demands of these agencies for Government inspection to assure the quality of their purchases often tax to the straining point the inspection service. Many of them declare that former fraudulent trade practices have been greatly minimized or eliminated, and that savings of hundreds of thousands of dollars have been effected through Government inspection on the basis of Federal grades and standards.

The experience of the Department of Agriculture is that its inspection service has improved marketing conditions by preventing unfair practices and obtaining better understandings between shippers and receivers, and has become an effective agency for promoting better grading and packing methods. The desire of shippers to obtain an official, unbiased statement of their compliance with contract terms, and an increasing appreciation of receivers as to the advantages in handling only standardized products, have resulted in the more consistent application of old-established grades and in the more rapid adoption of newly recommended Federal grades for many products.

Shipping-point and receiving-point inspections on the same cars have contributed to a knowledge of what happens to products during transit. In the past many misunderstandings between shippers and receivers have been due to lack of appreciation of the rapidity of changes in

condition in highly perishable products under the vicissitudes of transportation. Dependable information as to the effects of a small quantity of off-condition stock upon the carrying qualities of a lot as a whole has resulted in eliminating the questionable products at shipping points.

Until growers and shippers received authoritative statements through Federal inspection certificates of the serious deterioration from decay during transit they did not realize fully, from a marketing standpoint, the serious nature of such diseases as late blight of potatoes, brown rot of peaches, or blue-mold rot of citrus and deciduous fruits. The continued reports of losses from these and similar diseases have resulted in a much greater efficiency by shippers and receivers in applying preventive methods which have been developed by Federal and State research organizations for combating such destructive agencies.



## LESSON 4 . *Market News an Aid in Marketing*

J. CLYDE MARQUIS

**M**ARKET NEWS as collected and distributed by Government and State agencies is designed to help each producer answer the questions as to when and where to market. With better transportation, use of motor trucks, and wider knowledge of markets, producers are not inclined to sell everything through local buyers, but are anxious to study market conditions in all accessible sections in order to sell to the one that will bring the best returns.

The national market news system of the Federal Government had its beginning about 1913 and was greatly expanded during the war. Before that time nearly all market news was collected and distributed by private agencies. Some were professional market reporters, and many traders and commission men distributed reports on the market. Many of these reports were biased and unreliable, and one market could not be compared with another because prices were not on a common basis. The Federal market news service is useful because it is neutral, unbiased, and reports all markets on the same basis, so that prices in one place may compare with those in another.

The set-up of the Federal market news system involves branch offices in all important markets connected by a spinal cord of leased wire which ties them together. Though the headquarters is in Washington, the reports are not sent in there to be distributed. The leased-wire system now extends from Boston on the east through the principal markets, such as New York, Philadelphia, Washington, Pittsburgh, Cincinnati, Chicago, St. Louis, Kansas City, and Denver to San Francisco, with branches running north to Minneapolis and south to Atlanta, Jacksonville, Fla., and to Fort Worth, Tex. There are nearly 8,000 miles of leased wire with 38 offices and over 50 telegraph operators.

### *Specialists Gather News*

The system is operated through offices of specialists on each market commodity who are close to the market on that product. For instance, in the livestock office at the Chicago stockyards there are special reporters for cattle, sheep, and hogs. They observe the sales as actually made in the yards and are in constant touch with the movement of cattle in their yards. Their office is in the middle of the yards. From this office they send telegrams throughout the trading hours, which are copied in the livestock offices in all other such markets. A similar office is in the midst of the stockyards at East St. Louis, others at Kansas City, Omaha, and Fort Worth. Likewise, fruit and vegetable market news reporters are right in the midst of the trading in the South Water Market, Chicago, near the docks in New York, and in other markets.

The motto of the market news service is: To-day's markets to-day. The daily program begins with reports on shipments and receipts at the market, which are put on the leased wire the first thing in the morning. Many of these offices begin work at 4 a. m. As sales are begun, flashes of opening prices are put on the wire and released in other markets dealing in the same commodity. This procedure goes on until about noontime, when a more complete report of the day's market is prepared and released over many radio stations. Later in the day mimeographed reports are run off and mailed, other reports are given to the newspapers, numerous telegrams are sent to shippers' and farmers' associations, and the story of the day's transactions in the market is complete by 4 p. m.

By cooperation with nearly a hundred radio stations various types of these reports are flashed throughout the country. There is now no excuse for any farmer not knowing his market, since the facts are in the air if he will but equip himself to receive them.

In many cases State bureaus of markets and departments of agriculture cooperate with the Federal department in making this service complete. State departments aid in gathering and distributing news, usually giving particular attention to local State products. The scope of the market news service now includes very comprehensive reports on fruits and vegetables; livestock, meats, and wool; dairy and poultry products; hay, feeds, and seeds; and cotton. The reports on grain are confined to weekly reviews of the farmers' markets. The department has not entered the field of reporting grain prices in detail, as this is quite effectively done by the grain exchanges.

### *Value Depends on Use*

The value of market news to the farmer depends on his making constant use of it. He must study the reports, note the price changes, the kinds and qualities of products that bring the best prices, watch the volume going to market, and study the factors that bring about up or down swings to the market. One day's market report considered alone is not of much value. To understand marketing you must watch the market constantly.

Supplementing the daily reports, the Bureau of Agricultural Economics issues weekly reviews of the market on each product. These point out

what changes have occurred and why. When the season is done for any particular year or crop, the bureau issues a summary of the season on that crop. This shows again why prices have changed. Every potato grower, for instance, should receive and study daily market prices, the weekly potato review during the marketing season, the summary of the potato season, which is issued when the crop is mostly marketed, and the crop-estimate reports on production, which has most to do with determining price. Much of this market information is published in the monthly publication, *Crops and Markets*, issued by the Government for 60 cents per year. It is certainly worth 5 cents a month for every farmer to have available the facts regarding his business. Most business men pay hundreds of dollars to experts to gather these facts for them. The farmer has it done by his Government. All of the daily and weekly reports of the department are free. There is a charge only for the printed publication.

For further information on market reports of any product write to Market News Service, United States Department of Agriculture, Washington, D. C.



## LESSON 5 . *Warehousing an Aid in Marketing*

H. S. YOHE

**F**ROM TIME TO TIME many farmers who wanted to secure loans on their grain were told by their bankers that they could have the money if Federal warehouse receipts were given as security.

Federal warehouse receipt is a receipt which a warehouseman, who is licensed by the United States Secretary of Agriculture, gives to a farmer or anyone else who stores grain or certain other products with him. The receipt must show on its face the license number and that the warehouseman is licensed under the United States warehouse act, otherwise it is not a Federal warehouse receipt.

If a warehouseman represents himself as licensed and a farmer doubts that he is, he may make certain that the particular warehouseman has authority to issue a Federal warehouse receipt by mailing a card addressed to the United States Department of Agriculture, Washington, D. C., giving the warehouseman's name and address. He will be advised promptly.

A Federal warehouse receipt is distinctive, so that farmers and bankers can recognize it as soon as they see it. The paper is a light greenish-blue color. Eagles, with spread wings, similar to the eagle design seen on dollar bills, are watermarked in the paper. Above each eagle appear the words "Issued under authority of the," and underneath are the words "U. S. warehouse act," also watermarked in the paper. The receipts have the license number printed in the upper left-hand corner. Printed across the top in bold type are the words "Licensed and bonded under the United States warehouse act." The body of the receipt also refers to

the warehouse act and regulations thereunder. If a farmer who receives a receipt has any doubt as to whether it is genuine, he can send it by registered mail to the department, where experts will be glad to determine whether it is genuine or counterfeit.

### *Reasons for Receipts*

Many bankers want this Federal warehouse receipt and some insist upon it. There are several reasons. First, a warehouseman to become licensed must meet a certain standard of requirements. He must have the prescribed amount of net assets. He must have a good building. He must know how to care for the products. He must have accurate scales and must weigh accurately. He must show the identifying marks on identity preserved products so that the farmer and banker may be sure they are getting the same products that were put into the warehouse. The warehouseman must grade the products unless the depositors request him not to, and he must show the weight and grade of such products on the receipt. He must also show whether the products are insured. All this information is exceedingly valuable to the banker. It permits him to form an idea of the real market value of the products represented by the receipt and thus make a fair loan to the farmer.

The warehouseman must give a bond to the Government for the protection of anyone who may suffer a loss because of improper conduct on the part of the warehouseman. The warehouseman must also insure a farmer's products if the farmer requests him in writing to do so.

The investigations made to determine whether a warehouseman can meet the department's standards serve to eliminate undesirables. Many applications from warehousemen for licenses have been denied. Then there is the bond that gives protection. But the big feature that appeals to a banker is that after a warehouseman gets his license he is subject to continuous supervision by the department. Government examiners check his warehouse at least four times a year to see that all products are in the house and that he is complying with the law. Many warehouses have been inspected more than four times a year. If there seem to be suspicious circumstances, the warehouseman may get four inspections in as many months. What the department tries to do is to satisfy itself that things are as they should be. If they are not, the warehouseman's license is revoked. It is this disinterested checking by Government men that appeals to the bankers, and it ought to appeal to the farmer and everyone who handles such products in any way.

### *Advantages for Farmers*

There are also several advantages for the farmer. (1) The warehouse receipt which he gets from the warehouseman is not a mere acknowledgment that the warehouseman has received a certain quantity of grain or other product from the farmer, but it is a distinct contract between the warehouseman and the farmer, under which the warehouseman assumes definite obligations. (2) Generally the farmer can secure a lower insurance rate on his products when stored in federally licensed warehouses. (3) He can feel that when his products are in a federally

licensed warehouse they are checked from time to time by Government examiners whose business it is to make certain that the products are actually in the warehouse. (4) Under the law provision is made for stating the grade of products on the warehouse receipt. The department determines whether or not men who grade such products are competent to grade. Knowing the grade the farmer can turn to his daily paper, secure the daily market prices, and tell just exactly what his products ought to be worth in the market. (5) The warehouse receipt forms a lot better collateral for the farmer if he must borrow. He will find that bankers generally are disposed to look on it with much more favor than any other form of warehouse receipt. (6) With a receipt that is more acceptable to the bankers, the farmer not only has a wider money market in which to borrow, but he can frequently secure better interest rates. These are only a few of the advantages to the farmer in storing his products in federally licensed warehouses.

Practically all banks recognize the value of Federal warehouse receipts. The Federal reserve banks in some sections have indicated a preference for them. The Federal Reserve Bank of St. Louis has ruled that it will accept nothing but the Federal warehouse receipt as collateral to agricultural warehouse paper passed to it for rediscount. The Atlanta, Dallas, and Richmond Federal reserve banks view this paper as preferable to other forms. The Federal intermediate credit banks all prefer the Federal warehouse receipt. The ordinary commercial banks in many sections have expressed a strong preference for them. Ordinarily a farmer who presents a Federal warehouse receipt as collateral should have no difficulty securing a reasonable loan. If his banker can not handle the matter, he can easily arrange to take care of the farmer's needs through other banks.

### *Receipts Back Big Loans*

Thousands of individual farmers use the Federal warehouse receipt as security for loans, and a great many cooperative associations do. The associations have borrowed millions on the basis of this collateral. They have found the Federal warehouse receipt very acceptable to the banks in the big banking centers.

The question often arises, if the warehouseman that a farmer patronizes is not licensed under this law, what can the farmer do to get the Federal warehouse receipt? Generally speaking, the first thing that a farmer should do is to call his warehouseman's attention to this law, explain it to him as best he can, and then suggest that he write to the Department of Agriculture at Washington for information. Or the farmer himself might write for the information, and thus be prepared to meet the warehouseman. Then he should by all means enlist the cooperation of his local banker in approaching the warehouseman. He could also suggest to the warehouseman that if really interested in the subject the warehouseman should write to the Department of Agriculture, assuring him that the department will arrange to have a representative explain the workings of the law to warehouseman and what he would need to do to operate under it.

LESSON 6 . *Packages for Marketing*

H. A. SPILMAN

MANY PEOPLE who ship or who buy fruits and vegetables do not realize that there ever was any "con" about the containers in which such products were shipped. But there was, and still is, in some cases. A great deal has been accomplished in the last eight years in bettering conditions, but so quietly that few realize that anything has happened.

Shippers of berries or grapes, whose memories are long enough, may remember days when it was a question what size of quart box or 5-pound basket they would use next year. Housewives, some of them, can remember when the quart of berries they bought seemed a little smaller than the one which they had bought a couple of days before. Quart berry boxes from some sections had the reputation of being larger than others, and even now Chicago housewives are sometimes assured "This is a Michigan quart, lady; it's the largest there is."

Those were exasperating days for the berry grower who was honest and wanted to give full measure, because not always could he be sure that he actually had full-measure boxes, and if he did he faced the possibility that his berries might have to compete on the market with some in short-measure boxes and sell for no more. They were balmy days for the trickster, for he had a variety of short sizes to choose from.

Quart berry boxes sometimes held a quart, but more often held fifteen-sixteenths of a quart, or three-fourths quart, or two-thirds quart. It was an easy matter to obtain boxes so short that but 22 quarts of berries were needed to fill a 24-quart crate, and it was even possible to get boxes so small that but 18 quarts of berries were needed to fill such a crate.

*14 Sizes of 5-Pound Baskets*

The case was equally bad with the Climax basket, which is the basket in which eastern grapes are commonly marketed. There were 35 sizes of these known to have been made. True, they went on the market as 2-pound, or 5-pound, or 8 or 20, but what a difference in some of them. One manufacturer in New York State had in his factory 14 different-size forms for 5-pound Climax baskets. Four of these were used in one county in New York. This was a pretty mess for a grape grower to choose from, and certainly not an attractive one for the housewife to gaze upon when she went a-marketing.

If conditions were bad for the grower and the housewife, they were equally so for the manufacturer of containers. Berry boxes are being made all fall and winter; Climax baskets are made during the spring and summer. With so many sizes for the grower to choose from, the manufacturer could only guess what sizes he would choose, and if he guessed wrongly the boxes or baskets were left on his hands.

Sometimes he tried holding off until he could tell definitely, and then had to work day and night to keep up, with the result that growers had trouble getting containers as they needed them.

Some attempt was made to have conditions remedied through the enactment of State laws. These were not altogether satisfactory, particularly because of their lack of uniformity. Finally, in August, 1916, the United States standard container act was passed, becoming effective on November 1, 1917. This law has made possible what success has been obtained in taking the "con" out of containers. Just what does it provide? It establishes the 2, 4, and 12 quart sizes as the standard Climax baskets and prescribes dimensions for them; it establishes the one-half pint, pint, and quart dry measure as the standard berry boxes; and it provides that all other baskets used for fruits and vegetables shall be made in multiples of the dry quart.

Of the other types of baskets used for fruits and vegetables there are still quite a number of unnecessary sizes made. This is particularly true of hampers and splint or market baskets. A sufficient number of sizes of hampers would be made if they were standardized on the basis of the peck or one-fourth bushel. This would give us the  $\frac{1}{4}$ ,  $\frac{1}{2}$ ,  $\frac{3}{4}$ , 1,  $1\frac{1}{4}$ , and  $1\frac{1}{2}$  bushel sizes. Such a series of baskets would eliminate the 10-quart size which is unnecessary, the 14-quart which can easily be mistaken for the  $\frac{1}{2}$ -bushel, the 20-quart which is believed unnecessary, and the 28-quart which can not easily be distinguished from the bushel size. Legislation on this subject has been pending before Congress for several years, but final action has not been taken.

### *Market Basket Standards*

In the case of the splint or market baskets it is difficult to say just how many sizes are now made. Only a few of these sizes are really necessary. A suggested series of standards is 4, 8, 12, 16, and 24 quarts.

The manufacturers of the round-stave baskets have themselves succeeded in eliminating most of the unnecessary sizes. For shipping purposes this basket is now made only in the  $\frac{1}{2}$ -bushel and bushel sizes. Some  $\frac{1}{2}$ -peck and peck baskets are made for roadside sales, and some  $1\frac{1}{2}$ -bushel baskets for farm purposes. The new baskets developed from the round-stave type, known as the straight side or tub baskets, are made almost altogether in the bushel size, although some manufacturers are planning to put out a  $\frac{1}{2}$ -bushel size.

The manufacturers of baskets see clearly the benefit of standardization, and are anxious to extend it. However, they are unable to do this except with the cooperation of the grower and shipper. What the manufacturer of round-stave baskets has been able to accomplish in standardization he has done because his customers have been content to accept the few necessary sizes. The hamper manufacturer is unable to bring about the standardization he desires because his customers demand odd sizes, and he feels that he must supply the demand.

Standardization of containers is of importance to the consumer because he may be defrauded by the substitution of short-measure packages at the full-measure price. The manufacturer benefits because production is simplified and he can concentrate on a few sizes with consequent

lowering of cost. The carrier is interested because standardization means the elimination of many sizes which now complicate the problem of damage in transit, and because it narrows the container problem to a few sizes for which standard-strength specifications can be worked out and approved methods of storing and bracing can be devised. The grower or shipper benefits by any action that lowers the cost of manufacture and tends to reduce breakage in transit. In addition, standard containers provide him with a definite basis of sale so far as the size of his package is concerned, and he is thus relieved of unfair competition through use by his competitor of a short package.

### *Cutting Transit Losses*

Railroad loss and damage claims involving fruits and vegetables now amount to approximately \$8,000,000 per year. Among the many causes of these losses are rough handling, failure to store shipments properly in cars, delay in transit, lack of proper refrigeration, and frail containers. Such a tax on the fruit and vegetable business of the country calls for cooperation on the part of growers, shippers, and container manufacturers and carriers in an effort to reduce the damage to the lowest possible point.

The farmer or shipper who buys baskets could help out in this direction if he would stop making his purchases only on the basis of price. He should require the manufacturer to furnish a definite statement of the specifications on which his baskets are made. A manufacturer who is making a product of high quality will undoubtedly be glad to furnish such specifications.

By comparing the specifications of the different manufacturers the grower can determine which basket is really the cheapest for him to buy. There are many baskets on the market of such poor quality that they should never have been used in the shipping of fruits and vegetables. A container for the shipment of fruits or vegetables, properly loaded and under normal traffic conditions, should be strong enough to carry the commodity intact from the grower to the wholesale market, and thence to the retailer. Buyers should insist that their baskets be equal to the tasks imposed upon them. Such a container will be more expensive than a lighter one, but it is better to pay more for good quality than to pay less and take the risk of broken packages and loss of produce.

Crates and boxes are used to some extent for shipping fruits and vegetables in all sections of the country, but particularly in the Southeastern and Pacific Coast States. The southeastern growers, manufacturers, and railroads have combined to bring about a great degree of standardization of such packages, and the recognized standards are well adhered to. Much has been accomplished in the Pacific Coast States, and such standard containers as the apple box, peach boxes, cantaloupe crates, and lettuce crate are well recognized. Unfortunately, on some other containers, such as grape lugs, the desire of large growers or shipping organizations for individual packages has brought about considerable confusion as to sizes and dimensions.

An attempt has been made by the Bureau of Agricultural Economics to sift out from the mass of specifications the ones in greatest use, and these are available in mimeographed form. Reference to this schedule by those ordering crates and boxes would assist in bringing about uniformity in dimensions.



## LESSON 7. *Shipping to Market*

E. W. STILLWELL

**S**HIPPING TO MARKET as applied to farm products has a vastly different meaning than it had 50 years ago or even 20 years ago. In the "good old days" a farmer who wanted to ship his products to market loaded them in a wagon, hitched up the team, drove to town, and disposed of his load by personal contact with consumers, storekeepers, or others in the town to which he drove. He operated the entire distributing machinery. He assembled his goods for shipment; he packed them, graded them, loaded them, and transported them to market.

There were no middlemen, no commissions to pay, and no freight claims to file. In season, he had to worry about competition only from his fellow neighbors who drove to the same town, and out of season he usually had nothing to sell. He decided on the proper time to market his products to the best advantage by conversation with his neighbors, by personal contact with buyers, and by personal observation after he arrived at market. Market reports and radio were unknown to him.

To-day the situation is greatly changed. Shipping to market is no longer a simple process. It involves a long chain of services and middlemen. In this chain are many links and a number of kinks. The system is not unlike the chain-conveyor belt, with somebody standing at all the turns ready to keep it moving but taking toll for their assistance. The chain or conveyor upon which the product of any individual farm is carried to market varies considerably according to the locality in which the farmer lives, the product which he is shipping, and the particular method which he has elected for marketing his crop.

### *Chains—Cooperative and Otherwise*

If he is in a cooperative marketing association the marketing chain is controlled by that association. They have their own representatives stationed at many of the turns where there is likely to be trouble. At others they utilize established services, yet all of these services cost money.

If the grower does not belong to a cooperative marketing association his chain may begin with the country buyer who picks up his product at the farm and pays him cash for it. This buyer in turn probably sells it to a local shipping firm of dealers, brokers, or car-lot assemblers, who alone have the orders from the city and have the storehouse, the credit, the skill in grading and loading, and the control of produce in quantity

to fill car-lot orders of any grade or quality wanted. The railroad forms the next link in this chain, and for its services it makes a definite charge for a trip ranging from a few miles to several thousand miles.

The produce, having arrived at the city, is taken in hand by the car-lot receiver, who is equipped to handle large lots and who pays cash for what he handles. Or it may go directly to a wholesaler who handles products for the account of the shipper on a commission basis. Then the jobber takes hold and puts out the stuff in small lots, perhaps carting them to the retail stores, and extending credit. These functions he performs because the retail storekeeper can not handle large lots and can not bother to go to the railroad miles away and get the small quantity he needs. The jobber of course charges for his services. Then the retailer gets the final and largest slice for handing out the produce a few pounds at a time, perhaps on credit. Modern "shipping to market" is not simple.

The marketing chain usually shortens up a little in small cities, but not greatly to the gain of the distant producer. It is a long chain at best, but when the up-country producer tries to shorten the line very much he finds himself to be a green hand at a complicated business, running against difficulties and costs of which he never thought, and using time and labor needed at home.

### *Looking for Short Cuts*

The average grower senses these difficulties, but feels that there must be some sort of a short cut which will assist him in diminishing the spread between the price he receives and the price the consumer pays. In the "good old days" this price frequently was the same because it involved direct dealing between the two. At the most the two prices were separated only by the margin exacted by a local storekeeper.

Nowadays the grower gets only a very small proportion of the dollar which the consumer pays. Because of this fact he feels that there must be some waste. He requests aid from his Federal Government and his State government. He associates himself into cooperative organizations for the purpose of solving or at least alleviating his difficulties. He consults his county agent, his State college; and gradually he is bettering his knowledge and his position.

One of the things of which the grower finds himself in greatest need when he is shipping to market is reliable information about prices and conditions which affect prices in the principal markets in which he is interested. He used to obtain this information by personal contact with buyers. Now he frequently is hundreds of miles away from his market. In that market his products compete with similar products from all parts of the country. It is essential that he have accurate prompt information about this competition and about conditions in his market.

The necessity for such service was recognized as early as 1913, when a conference was called by the Secretary of Agriculture for the purpose of ascertaining what best could be done to assist farmers in marketing their products. As a result of that conference and following preliminary investigational work it was determined that the Government could

be of real assistance to growers by the establishment of a telegraphic market news service. First tried out on fruits and vegetables, it since has been extended to cover practically all of the major farm products.

Through this service, which is conducted by the Bureau of Agricultural Economics, growers throughout the country can obtain, in the form of mimeographed reports, through the press, by telegraph and by radio daily, in fact almost hourly, information covering the prices at which their products are selling in the principal markets, the supply of those products on hand in those markets available for sale and the quantity moving toward the market. The New York producer of apples knows the number of apples that are being shipped from the far-away State of Washington and he knows the quantity of apples from all of the competing States which are available for sale each day in New York City and in other important markets. The same thing is true for the producer of other fruits and vegetables, of livestock, and of other farm products.

### *Unkinking the Chains*

Even with this knowledge, however, the producer has many problems facing him when he wants to "ship to market." This service, and other aids which the Government makes available to him, give him a background which, if used intelligently, enables him to determine the direction and the type of marketing chain which he will employ. However, as he studies the situation further he discovers that these various marketing chains get tangled and kinked. He wonders if so many of them are necessary and if some of them could not be shortened by removing some of the links. He becomes more and more insistent that these chains perform their work efficiently.

Within the past year in various sections of the country he has supported and insisted upon the organization of some of these links into so-called clearing houses in order that he might get more money for his product. The operation of these clearing houses has made it possible to overcome some of the difficulties that caused kinks in the marketing chain by a mutual exchange of information, by the elimination or the minimizing of certain bad competitive features, and by a more intelligent use by all of the information made available through various agencies.

Much remains to be done to simplify this process of "shipping to market." Each of the various links or factors performs certain definite services, but far too often they get in each other's way. The growth of the cooperative idea in marketing, the intelligent use of the many services given by the department, the aid extended by State and private agencies interested in the farmer's welfare, and his own individual efforts guided by the hard knocks of experience will gradually better conditions. Meantime, shipping to market remains a complicated bugaboo. It is not as it was in the "good old days." It is a contraption that must be studied, browbeaten, wheedled, and finally understood and conquered. Gradually there must be fewer kinks or turns, and eventually the fees exacted for each of the services must be brought within reasonable limits.

## LESSON 8 . *Advertising in Marketing*

J. CLYDE MARQUIS

**A**DVERTISING has been urged as a way to increase consumption of farm products and to take care of surpluses. It has been demonstrated that through advertising a wider distribution can be made and the consumption of a given product increased without seriously displacing other products, at least not to a noticeable degree. Such advertising of semiluxuries or products other than staple foods has been most effective. For instance, the cranberry growers' marketing associations now know just how much advertising must be done to move a crop of a particular size. Through more vigorous advertising more people will add a few cranberries to their holiday menus, and the crop is disposed of, whereas without advertising consumers seem to forget the cranberries and fail to use them. It is not believed that adding a few cranberries to a holiday dinner reduces the consumption of other food products; in fact it may increase it, since the cranberry is an appetizer.

The advertising of farm products calls for large selling organizations. One of the advantages of large marketing organizations for fruits is the opportunity to advertise. Advertising involves considerable expense to be effective, with the use of brand names or trade-marks, and an organization which can furnish sufficient supplies of the trade-marked product to make it available in cities where the advertising is done. Good advertising involves not merely having something to sell, but it must be for sale through numerous retailers where the advertising is done to make it easy for consumers to purchase the advertised goods. Otherwise advertising is wasted.

### *Uses of Advertising*

Advertising may be used to impress the public with a trade-mark or brand name of a product, or it may be used to call public attention to a surplus when prices are low and receipts at the markets heavy so as to increase consumption temporarily. Advertising may be used effectively on a small scale by growers of high-grade specialties, such as honey and maple sirup, who wish to get regular customers for mail orders. Advertising is also effective to get customers for a farmers' stand in a public market, or a roadside stand near a city, or for customers to come to a farm or store to buy food products in wholesale quantities.

The big national campaigns to increase the consumption of meat, milk, or apples involve large costs running into the hundred thousands of dollars. Each must be managed by a national selling organization, and the cost must be spread over the entire industry by a small charge against each package of the product that is sold. For instance, a national apple advertising campaign may be financed by a small charge per box or per barrel on each shipment of apples. A national meat-advertising campaign was recently conducted by joint action of the packers. Various other associations handle advertising campaigns on this system by taxing the product that moves into commerce. The pos

sibilities of this form of advertising are enormous, since a small amount of money gathered from each producer amounts to an enormous total sum which, when properly used, would have great influence on consumers.

One of the chief uses of advertising in connection with food products is to teach consumers that the quality and kind of farm products change from year to year, and sometimes from month to month, beyond the control of the producer. Through advertising the consumer can be told how to change his food-buying habits to meet these conditions. For instance, strawberries may be plentiful at the same time that the prospects for peaches are very poor. The weather may have affected the time when strawberries will reach the market; frosts may have killed the early crop, and the late crop may be later than usual. Through advertising by producers' associations the public can be kept informed and will buy more strawberries for preserving when they know that they can not buy peaches later, and they will buy strawberries for canning even at higher prices when they know that a part of the later crop has been destroyed.

Advertising puts an obligation on the producer to standardize his products. They must be of uniform quality, one package as good as the other, or producers will not believe the advertising. This means that a farm product sold under a brand name must be carefully packed, graded, inspected, and labeled by the producer. This can best be done through a packing house or cooperative marketing association.

### *[Good and Bad Advertising]*

Good advertising is unquestionably effective. No one can dispute the fact. But all advertising is not good advertising. The producers' organization needs to study the consumers' requirements before attempting to lay out an advertising campaign. Advertising must be truthful, or the public will quickly turn against it. Good advertising is a strong instrument in the hand of farmers' marketing organizations, which they will some day learn to use as effectively as other manufacturers now use it.

Farmers who have something to sell to their neighbors or near-by towns can use effectively any one of four methods of advertising. The simplest and cheapest form is the roadside billboard. If the farm is located on a main highway, billboards come to the attention of large numbers of people, and although travelers may give but a fleeting glance, a clear-cut announcement of something for sale is remembered. Billboard advertising needs to be very brief, easily read, and definite. The development of the roadside market on main highways for the sale of farm products has made billboard advertising effective. There are many roadside stands at which farmers are now selling products chiefly from their own farms, amounting in value from \$5,000 to \$15,000 annually. In many instances travel by automobile has made it possible for enough people to pass a given point, so that plenty of customers are available to make a profitable business.

Newspaper advertising by farmers who have products to sell in near-by towns is the standard method, and as a means of establishing

contact with customers is relatively inexpensive if the product is one that is desirable and needed by people in the community.

Producers of special products, such as seeds, plants, animals for breeding, who must seek their customers in widely scattered States, turn to trade papers which reach these scattered prospects, because of the trade interests, such as fruit growing, dairying, poultry raising, or gardening. Such advertising is somewhat more expensive unless the space is restricted, and usually should be combined with the fourth form recommended, or direct-mail advertising.

Advertising by direct appeal by mail is an effective method if one is selling a high-grade product which may be readily shipped or delivered, and upon which repeat orders may be secured from the same customer. Products like eggs, honey, specially selected and packed fruits, and home-canned goods can be advertised effectively by direct mail. Post cards, folders, or form letters describing the goods in detail and giving price lists are mailed to selected lists of customers. These lists may be secured through newspaper advertising, through personal canvass in resident sections, through offers of sample shipments, from telephone directories, lists of members of clubs and other organizations, and in other ways. As soon as a sale has been made to a customer, advertising matter and later announcements are sent at regular intervals. Through the use of such advertising methods many farmers have built up circles of regular customers for such products as fruits, vegetables, dairy products, and poultry, so that they are not seriously concerned with the problem of finding a market. Theirs is chiefly a problem of being able to produce at low costs so as to be able to sell their goods at prices which are not too much above the current market price. Such customers will usually pay a premium for higher quality produce, but not too high a premium in the face of cheaper goods in the local store.

The amount that is spent in advertising can easily become an excessive expense if it is not wisely distributed, or if care is not taken to furnish a high grade of produce, and to follow up sales and hold customers.



## LESSON 9 . *Financing Marketing*

ARTHUR N. MOORE

GETTING THE PRODUCTS of the farm into the hands of the ultimate consumer is a long and complicated process. In general, these products must be assembled, graded, processed, or manufactured in various ways, shipped and reshipped, and ultimately parceled out at the place and at the time they are wanted by the final users. These operations require time as well as labor. Furthermore, most farm products are seasonable as to their production, while consumption is a continuous year-around matter. This means that in considerable part they must be held in storage by some one either before or after their conversion from raw material to finished consumption goods or at some intermediate stage of the process. Each successive buyer

and owner of the product who brings it one step nearer to the ultimate consumer must as a rule advance to the preceding owner the purchase price agreed upon. The farmer producing wheat, or cotton, or livestock, or other products can not wait for his pay until his product is purchased and paid for by the final consumer. Neither can the country buyer or shipper, nor can, as a rule, the other middlemen who successively buy and own the product.

The various middlemen rarely have funds of their own sufficient to pay for the products they buy for future resale. They, therefore, rely upon banks or other credit agencies for loans based upon their purchased products as security. These goods are represented by bills of lading while in transit from place to place and by warehouse receipts while in storage, and these documents may be deposited with credit institutions as security for loans.

For illustration let us take the case of wheat which the farmer sells to the local elevator or grain dealer for cash. The farmer's finance problem stops right there, but that of the dealer begins. He waits until he has a carload or more of wheat. Then he ships it to a grain merchant at the terminal or central market. But he does not want to wait for payment until the wheat has been received and sold. So he arranges to draw a draft against the grain merchant which the latter has agreed to honor. The dealer takes this draft, with bill of lading attached, to his local bank, and the bank forwards it to the grain merchant at the terminal market for payment. Suppose the draft is payable after 30 days and the local dealer does not want to wait. He can then have it discounted at his bank, with the bill of lading (giving title to the goods) as security. The banker deducts interest for 30 days in advance and gives cash for the balance of the draft. Sometimes the local bank is unable to accommodate the dealer with its own funds. It can then borrow money from its correspondent bank in the city by rediscounting the draft and indorsing it. Suppose the wheat is bought at the central market by a terminal elevator company. The wheat can not be sold as fast as it is received from country stations. It must be held in storage bins by the millions of bushels until it is wanted by mills. In order to buy and hold wheat, terminal companies borrow with warehouse receipts as security. Their notes or promises to pay are known as "grain paper." Grain paper has a wide market, and is bought by large banks in the money centers. The process of financing does not end here. Millers and exporters are financed in similar fashion by drawing drafts on buyers and paying interest charges.

### *Farmers as Risk-Bearers*

In many cases the farmer needs additional credit accommodations in order to market his products to better advantage. The dumping of the crop on the market all at once is likely to depress the price, particularly where transportation and storage facilities are limited or where competition is restricted. Adequate credit would at times permit more orderly marketing and a greater return. In the past it has been the practice of most farmers to sell for cash at harvest time rather than pay storage and

interest charges for holding the crop. In this way they have shifted the functions of financing and risk-bearing to organized middlemen. Recently, however, they have come increasingly to recognize the advantages of performing some of these functions collectively through cooperative marketing associations.

One reason why farmers often find it hard to get credit for holding and marketing their crops is their lack of suitable storage facilities. As proper storage facilities increase, however, farmers or their cooperative associations are storing their products to a greater extent. For example, a cotton grower may take a bale of cotton to a warehouse. He gets a warehouse receipt which certifies its weight, quality, and value. By taking this receipt to his bank and depositing it as security he can usually get a loan which will enable him to hold his cotton for a more favorable price. If it is stored in a Federal licensed warehouse, or in another type of warehouse where safety and disinterested supervision of the security are assured, banks will usually loan more readily and more liberally than where these safeguards are lacking. If the cotton is not in any warehouse, the danger of loss by exposure to the weather is so great that banks do not like to take it as security at all.

Another reason why farmers lack marketing credit for the most advantageous disposal of their crop is that they have no direct connections with central markets. A farmer who has a reputation for honesty and responsibility can sometimes sell his grain, livestock, or fruit to the central market directly and draw a draft on the city merchant which he can discount at his local bank, using the railroad bill of lading as security. This requires a relation of mutual confidence between buyer and seller. The financing of marketing of fruits and vegetables is frequently done by commission firms at central markets aided by city banks. Contracts are made with the grower for the delivery of specified quantities of goods, or for all the produce from a given acreage. In return the grower is entitled to receive various advances on his crop, including funds for marketing purposes, such as packing and shipping the product. Such advances are often based upon the crop and such other resources as the grower possesses.

### *In 1925, 11,000 Cooperatives*

There is one way in which farmers to-day are beginning to do their own marketing on a large scale, and that is through cooperative marketing associations. In 1925 there were nearly 11,000 such associations with an estimated membership of over two and one-half millions of people and an estimated business of nearly two and one-half billions of dollars. Take the cotton associations. They need little investment capital in the form of plant and equipment, but they need large amounts of credit to finance the purchase of cotton. When they were first organized in 1921 they could not get much support from local banks, but the War Finance Corporation granted them lines of credit which greatly improved their borrowing position with private banks. They now borrow extensively from large city banks in the South and East and from the intermediate credit banks on the security of warehouse receipts and

shipping documents. Most of their loans received are from 30 to 90 days. Frequently they borrow also from their own members for short periods. To-day they can borrow from the intermediate credit banks at  $4\frac{1}{2}$  per cent interest in sums not exceeding 75 per cent of the value of the cotton pledged as security.

The 12 Federal intermediate credit banks, which are Government owned, were established as a result of the agricultural credits act of 1923. The capital was subscribed by the Federal Treasury. They obtain most of the money which they loan to farmers by the sale of their short-time debentures secured by acceptable agricultural paper. The interest rate they charge to borrowers may not exceed by more than 1 per cent the rate borne by the last issue of debentures. The intermediate credit banks do not lend directly to farmers, but they do lend directly to cooperative marketing associations. Twenty-two commodities have been declared eligible for such loans, including cotton, corn, wool, tobacco, peanuts, broomcorn, beans, rice, hay, nuts, dried prunes and raisins, and canned fruits and vegetables. The intermediate credit banks also lend money to banks, agricultural credit corporations, and other credit agencies by rediscounting the notes of farmers. Since organization, they have lent nearly half a billion dollars, of which almost two-thirds has been direct loans to cooperative marketing associations, with such commodities as security.

### *Agricultural Credit Corporations*

Recently some of these associations have organized agricultural credit corporations to make production loans to members or to enable them to pay off mortgages on their crops. The principal reason is this: In the cotton States especially members of cooperatives sometimes have debts to pay at harvest time for which they need the full value of their cotton at once. Consequently, they may be unable to deliver their crop to the association according to contract, being forced to sell it for its full market price immediately in order to pay their debts. Local banks are often unable or unwilling to renew production loans in order that farmers may wait until their cotton is sold. The agricultural credit corporation organized by the cooperative marketing association is helping to solve this problem by providing the necessary extension of credit.

Agricultural credit corporations are incorporated under State law with a minimum capital of \$10,000 for the purpose of obtaining funds from the intermediate banks to loan to farmers. The amount they can borrow is limited to ten times their capital and surplus, and the rate of interest they may charge to farmers is limited as a rule to 2 per cent over and above the rate they pay for money borrowed from the intermediate credit bank. For livestock loans this margin may be  $2\frac{1}{2}$  per cent. That means that at present the maximum rate is from  $6\frac{1}{2}$  to 7 per cent. When a bank or a credit corporation lends to a member of a cooperative marketing association, there is generally an arrangement for the association to turn over the proceeds from the sale of the crop to the creditor until the debt is paid.

The provisions of the Federal reserve act of 1913 have been amended to make it easier for farmers to obtain production and marketing credit through banks and marketing associations. Paper issued or drawn for an agricultural purpose may be discounted with a Federal reserve bank, even though it has nine months to run, whereas ordinary commercial paper is limited to 90 days. This provision applies also to paper issued by cooperative marketing associations. Federal reserve banks may now discount sight or demand drafts drawn to finance the domestic shipment of nonperishable, readily marketable staples which are secured by bills of lading or shipping documents, provided such paper is not held more than 90 days. The law also favors bankers' acceptances which have been drawn to finance agricultural operations by permitting them to run six months instead of 90 days.

While there is need for further improvement in agricultural credit facilities, particularly in the financing of plant and equipment of cooperative associations, these facilities, with reference to marketing as well as to production, have been materially strengthened in the last decade.



## LESSON 10 . *Marketing Farm Produce by Parcel Post*

LEWIS B. FLOHR

**U**NDER USUAL CONDITIONS it will not be found profitable to ship farm products by parcel post farther than the third zone; that is, about 300 miles. Occasionally, when there is a good demand, it may pay to ship farther than that. The farmer should keep himself posted on market reports of prices as well as supplies available in the markets. The Bureau of Agricultural Economics now covers most farm products in its market news reporting work. Those reports are printed by many papers and broadcast by radio stations all over the country.

Parcel-post customers are procured in various ways. If the farmer lives on an improved road where town and city automobiles pass frequently, he can announce on a bill board what he has to sell, or he can make a personal canvass in the city or circularize a mailing list, or get customers through friends. Most country folk have some relatives or acquaintances in towns or cities through whom they can get a start in marketing by parcel post. Each satisfied customer usually means additional customers among his friends.

Marketing by this method should usually begin on a cash-with-order basis. Later, if the shipper feels sure he can trust a customer, he could arrange to have payments made, say, once a month. It is a good idea to offer to exchange references with prospective customers, but always be sure to investigate and make sure that the names given you by the prospective customer are dependable.

### *Prices Must Be Reasonable*

Prices asked must be reasonable. The city man will not pay more for stuff shipped direct to him than the price of the same stuff in the city market. That is, he is looking for a good article at a less price or a better article at the same price. Mistaken ideas about high prices paid by city folks must be avoided. Strawberries in January necessarily sell at a high price, and sometimes even when strawberries are plentiful, extra fancy ones do bring fancy prices. It must be kept in mind that those fancy prices represent only a small part of the strawberry supply of any market. The people who are willing to pay a fancy price are not very many, and extra fancy strawberries are not very plentiful on the market. Remember in packing a product, say, strawberries, for instance, to be sure to put nice, big good-looking berries on the top of the box, but first be sure that the same kind and quality of berries fill the box underneath the top layer. A good, well-graded product usually sells when an ungraded one will not sell.

Sometimes farm folk think that city people are mighty particular about what they buy. Remember, farm folk are used to good fresh stuff; even though it is not of good or best grade, it often suits the farm people, because it is fresh and can be used right away. If an apple is beginning to rot, on the farm, the rot is cut out and what is left is used. It is not good marketing practice, however, to send to market an apple or anything else that has begun to rot. Before it reaches the consumer it will probably be entirely rotten.

### *Planning for Quality*

Quality stuff for marketing by parcel post or by any other method should be planned for even in selecting the seed. Pay attention to quality all along the line—in production, gathering or harvesting, and in preparation for market, and this includes the package. A nice appearing package is attractive, whereas the same product in an old, second-hand, dilapidated container is not attractive.

More parcels of eggs perhaps than of any other commodity are being marketed by parcel post. Most containers for eggs are made of corrugated paper board, with two thicknesses of the corrugated board between the egg and the outside. There are also containers made of lightweight metal, with linings and fillers of corrugated or similar paper board.

Many other things can be marketed by parcel post. Practically all fruits and vegetables, fresh meats, cured meats, dried and evaporated fruits, honey, maple sirup, and numerous other things are so marketed.

The postal regulations require that all food products offered for mailing must be in good, sound condition; that is, if fruits or vegetables, for instance, they must be in such condition that no juice or decayed matter will leak out to damage other mail matter. They must also be in a container which will carry them properly. Most commercial containers used for shipping farm products by other means of transportation are admissible to the mails if they come within the limits of size and weight. The measurements of a parcel in girth and length added

must not be over 84 inches. The weight of any parcel is limited to 70 pounds for the first three zones and 50 pounds beyond the third zone.

Limits to Use of Parcel Post

Marketing by parcel post, like any other method of marketing, has its field of usefulness and also its definite limitations. The size of our country, the big distances between important producing regions of many commodities, and the densely populated parts of the country where they are largely consumed naturally make it more economical to ship most food products in car lots. However, there is a considerable field of usefulness for parcel post for marketing various kinds of farm products. This whole subject is covered in Farmers' Bulletin 1551, "Marketing Farm Products by Parcel Post," which can be had free on request made to your Senator or Representative in Congress or direct to the Office of Information, Department of Agriculture, Washington, D. C.



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# U. S. RADIO FARM SCHOOL

U. S. Department of Agriculture  
*Office of Information---Radio Service*

Farm Economics--Series 3

## COOPERATIVE MARKETING

February 22, 1928, to  
April 25, 1928

*By Specialists of the Bureau of  
Agricultural Economics*



## PREFACE



FARMERS GENERALLY have found in cooperative marketing a method well adapted to their needs. The cooperative method is now being applied in the marketing of practically all farm products and in cooperative purchasing, credit, etc. Cooperative organizations have grown rapidly during the last decade. This growth can be explained only by the fact that cooperation has rendered a distinct service to the farmers of this country.

Research work of the Department of Agriculture relating to cooperative marketing is based upon the needs of the expanding cooperative movement. Research projects are planned to assist farmers and their cooperative associations with problems of organization, management, financing, merchandising, and membership relations. Educational and service work is also carried on in marketing of agricultural products, cooperative purchasing of farm supplies, and other cooperative activities among farmers.

Washington, D. C.

Issued April, 1928

# Cooperative Marketing

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## LESSON 1 . Development of Cooperative Marketing Associations

R. H. ELSWORTH

COOPERATION IN AGRICULTURE is as old as the industry. In the very beginning man discovered that many tasks could be performed more satisfactorily by the joint effort of two or more individuals, hence group action in the tending of sheep, the driving of cattle to market, the raising of barns, and the threshing of grain. Cooperative processing of farm products had its beginnings in the cheese rings of the Swiss and French peasants in the Jura Mountains. These peasants borrowed milk from one another to get enough to make a cheese, which eventually led to pooling the milk and manufacturing cheese at a common center and later developed into cooperative marketing.

The earliest recorded instance of cooperative cheese making in the United States was at Goshen, Conn., about 1810. From 1840 to 1860 farmers in New York, Ohio, and Wisconsin started enterprises for the cooperative making and selling of cheese. About 1856 a factory for the making of butter was established in Orange County, N. Y. A cooperative cheese factory established in 1863 in Montgomery County, N. Y., is still operating.

### First Farmers' Elevator

Cooperative grain marketing seems to have had its beginning in the Mississippi Valley. A farmers' elevator was established at Blairstown, Iowa, about 1868. By 1874 there were 28 such enterprises in the State.

The earliest known association formed by fruit and vegetable growers for marketing their products was organized at Hammonton, N. J., in 1867.

A formal association for the shipping of livestock was organized by a group of Nebraska and Kansas farmers at Superior, Nebr., in 1883. Wool producers near Greencastle, Ind., formed an association for collec-

tive action in marketing in 1885. Although cooperative activity in behalf of cotton marketing dates back to the period following the Civil War, the oldest of the existing associations was formed in 1889. The egg circle undoubtedly represents the earliest form of cooperation in the marketing of poultry products. Nuts have been marketed cooperatively since 1889 and honey since 1899.

At the beginning of the present century there were about 2,000 associations marketing farmers' products cooperatively. There were cooperative creameries, cheese factories, grain elevators, fruit-packing houses, cotton gins, livestock-shipping stations, plants for grading and selling nuts, for distributing milk, for assembling and shipping wool, and for assembling, shipping, and selling many other farm products.

### *Movement Grows Steadily*

From 1900 to 1915 the number of active associations increased to about 6,000, and during the next 10 years to about 12,000.

Prior to 1915 most of the associations serving the farmers were local in character—that is, they served a single community—but since 1915 the large-scale associations and the terminal market sales agencies have become important factors in the cooperative marketing movement. The large-scale marketing association may be either a federation of local units or a single organization contacting directly with a large number of producers, and operating over a wide area such as a State or an entire producing region. It furnishes uniform marketing service to all producer members, and usually handles but a single product or several closely related products. About half of the farmers selling cooperatively to-day are selling through such organizations.

Cotton, tobacco, oranges, raisins, dairy products, and wool are sold largely through this type of organization. The cooperative sales agency usually operates in the terminal markets where it receives the farmers' products, and attends to the sales and distribution. Many thousands of head of livestock are marketed in this way, also large quantities of poultry products and some of the dairy products.

Although the number of cooperative associations is not increasing materially to-day, the number of farmers served by these enterprises and the annual volume of business is increasing steadily.



## LESSON 2 . *Why Farmers Cooperate*

CHRIS L. CHRISTENSEN

**T**HE MOST COMMON REASON for the organization of cooperative marketing associations is the dissatisfaction of farmers with prices they are receiving. Rightly or wrongly, farmers usually consider marketing agencies responsible for low prices, and they turn to cooperation as a remedy for these conditions.

Farmers generally have found in cooperative marketing a method of transacting business which is well adapted to their needs. Cooperative organizations have grown rapidly during the last decade until to-day they transact a total annual business of approximately two and one-half

billion dollars. This growth can be explained only by the fact that cooperation has rendered a distinct service to the farmers of this country.

The service of cooperation has not consisted in an advancement of the price of farm products, if by that is meant an arbitrary increase of the price of agricultural products above the level of other commodities. Anyone familiar with agricultural conditions since 1920 knows that agricultural prices during that period have been below rather than above the general price level. Cooperation has not brought about a general improvement in farm prices. It has not developed to such an extent that it can possibly raise the basic price, although there are indications that in particular sections and for particular commodities it has had an influence on the basic price. Cooperative marketing, however, has made important contributions to better marketing practices which tend to stabilize prices and increase returns to the producers. Briefly, these are improvements in local marketing practices, brought about by local and regional associations, and improvements in distribution which have been effected by many large-scale cooperatives.

### *Progress Is Imperative*

We can not stand still in marketing. Conditions are always changing, and agencies that sell farm crops must make adjustments to meet these developments. The growth of chain-grocery stores is an example of an important change in distribution that has taken place within the last few years.

Cooperation is necessary to meet these changes and to improve marketing practices. Changes and improvements may be made by middlemen agencies, but they are made comparatively slowly. Cooperative associations, on the other hand, are constantly seeking to find better ways of marketing farm products. There is a fundamental reason for the difference in the attitude of privately owned and cooperative marketing agencies. The middleman is only one link in the marketing chain. Although he performs an indispensable service, he is interested primarily in receiving a supply of wheat or livestock from the farmers, or from other dealers, and selling it to his customers at an advance in price which will pay his expenses and give him a reasonable profit. So long as he receives a steady supply and a steady profit it makes little difference to him what the farmer receives for his crop or what the consumer pays for it.

The farmer, on the other hand, has a vital interest in every part of the marketing chain. His profit is affected by the expenses and profits of the country dealer, the city wholesaler, and the retailer. If the cost of retailing butter is too great, the dairy farmer suffers, either because the price he receives is too low or because the price the consumer must pay is too high and, consequently, less butter is used. The result is eventually the same—a reduction in the farmer's returns. Potato growers in Michigan have a vital interest in the cost of trucking potatoes from the wholesale markets to the retail stores in New York City. The farmers' returns are affected, directly or indirectly, by every loss, waste,

and excessive profit that occurs in the marketing of their products from the time they leave the farms until they are ultimately consumed.

### *Associations Build for Future*

Cooperative associations, therefore, have been active in developing methods for eliminating losses and excessive marketing costs. They have adopted standard grades to prevent the shipment of unsalable and inferior products. They have studied the demands of their customers so as to supply them with the kind and grade of product that will best meet their needs. They are endeavoring to shorten the distance between the producer and the consumer. Associations that market cotton and a few of the larger associations that market wool, for example, are developing the sale of their products direct to mills. Many wastes, small in themselves, but large in the aggregate, have been reduced through improvements in storage, handling, and selling practices that are fostered by cooperative associations.

The price advantage which farmers seek when forming cooperative associations is seen to be more than merely a good price for one sale or for one season. The members of cooperative associations are building for the future even more than they are meeting present-day problems. The associations can deal more effectively with the many factors that influence prices as they become stronger financially, as they gain in experience, and as they have delivered to them a larger percentage of the farm crops and livestock produced in the United States.



## LESSON 3 . *Some Accomplishments of Cooperative Creameries*

THOMAS G. STITTS

**O**F THE CREAMERY BUTTER manufactured in the United States, 42 per cent comes from Minnesota, Iowa, and Wisconsin. It has been estimated that at least 60 per cent of the country's supply of the finer grades of butter is manufactured in this section. These three States may justly claim leadership not only in quantity but also in quality of butter production.

Approximately 70 per cent of the butter manufactured in Minnesota, Iowa, and Wisconsin is made in cooperative creameries. About 1,200 of these farmer-owned plants are in operation. For the most part these are established business units, well past the experimental stages of development. The first of these creameries was established in the early nineties, and the majority were built before 1910. There is no question but that cooperative creameries are well established in this section and that, under competent management, they perform a service that is well worth while to the dairy farmers.

The typical cooperative creamery in this section is a farmer-owned plant manufacturing from 300,000 to 400,000 pounds of butter annually. A number of plants manufacture well over a million pounds, but these

are rather unusual. Each plant is managed by a board of directors, who in most instances are farmer-producers. The board hires an operator or butter maker, who is in charge of the actual manufacturing of the butter. The creameries are financed by local capital, generally through the sale of stock to the producers.

### *Why Creameries Succeed*

For the United States as a whole there has been no great increase in number of creameries in the past few years, although there has been a marked increase in the volume of butter made. A few creameries have been built in the new dairy communities, but the improvement of roads and the use of the automobile have increased the territory which a creamery can serve. Several creameries in Minnesota have been closed during the past five years, while the number of farmers patronizing creameries has shown some increase. Probably at no time has the cooperative creamery movement been in a stronger position than at present, and never has there been greater interest on the part of the farmer in the manufacture of the highest grades of butter.

Just why have cooperative creameries succeeded so well, and what has been their significant accomplishment for the dairy farmer and the dairy industry? The creamery is a relatively small plant, located usually where butterfat production is heavy. It is therefore near the producers and within easy reach of an adequate volume to insure economical manufacture. Creameries are particularly well suited to the intensive dairy sections, especially for the manufacture of a high grade of butter. The cooperative centralized creamery is adapted to those sections where dairying is not intensively developed. There are now several very successful associations of this kind operating in Nebraska, South Dakota, and Kansas.

With a creamery near the farm, cream can be delivered three and four times a week. Regularity and frequency of delivery are important factors in obtaining a high grade of cream. The quality of the butter manufactured depends in large measure upon the condition of the cream received at the plant. The success of the cooperative creamery can then be attributed in no small degree to its favorable position for the manufacture of a fine quality of butter. A large percentage of the fine butter received at the principal markets is manufactured in the cooperative creameries in Minnesota, Iowa, and Wisconsin. The important contribution which the cooperative creamery has made to the dairy industry rests largely upon the lead it has taken in the production of the finer grades of butter. Creameries also have had a special advantage in the manufacture of high-scoring butter as compared with the large centralized type of plant.

### *Success Based on Quality*

The creamery is a real accomplishment in another way. It affords the farmer a market for a quality product. Cream deteriorates in quality quickly unless special facilities are available for keeping it cool and uncontaminated by foreign odors, and a market close at hand is essential for the farmer who is to sell a high-quality product. This market the creamery affords in an excellent manner.

Costs of manufacture per pound are probably no lower, if as low, in the cooperative creamery as in some of the large private centralized plants, but there is undoubtedly a lower transportation cost in shipping butter than in shipping cream. Where there are no creameries the farmer usually sells his cream to a cream station, which ships it to some large creamery, or he may ship it direct to the large creamery. The indirect method of collecting cream not only requires considerable time, but it also entails considerable additional expense. Shipping butter rather than cream results in a lower net cost per pound of butterfat.

In general, it may be concluded that the greatest accomplishment of the cooperative creamery has been to afford a market for quality cream. Quality has been the keynote of the success of these organizations. This has been an incentive for the extension of the dairy business, and has contributed in a large way to the income from dairy farms.



## LESSON 4. *Cooperative Marketing of Fluid Milk*

HUTZEL METZGER

**T**HE GREATER PART of the growth and development of the cooperative marketing of fluid milk has taken place within the last 15 years.

The failure of the price of milk to increase with the rapidly rising prices of other commodities which accompanied the World War made it necessary for milk producers to take some action or to discontinue business. The success of the Chicago milk producers' strike in 1916 was the signal for a number of other similar disturbances. Out of all this activity came most of our large fluid milk cooperatives.

At the present time there are about 160 fluid milk marketing associations in the United States, which last year marketed about \$350,000,000 worth of milk. The largest of these, which supplies milk to New York City, handled almost \$85,000,000 worth of milk for its members in 1927, some of which was transported 400 miles.

The primary reason for the existence of these cooperatives is to secure a better price for a given product. The cooperative can do this largely in two ways; (1) by its bargaining power, and (2) by adjusting its supply and product to meet the market's requirements.

The importance of the first of these—bargaining power—has been overemphasized. The principle involved is closely akin to the monopoly idea, advocates of which hoped to fix prices above the level justified by supply-and-demand conditions, through control of a large part of the supply. The list of failures of cooperatives built on this idea is sufficient evidence of its unsoundness. Bargaining power, however, can have some influence if prices are below what they should be, because of lack of adjustment of price to the supply and requirements of the market.

### *Basis of Milk Prices*

The greatest price benefits can be obtained by so regulating the supply that it most nearly meets the market's needs. Regardless of the plan of carrying it out, the basis of milk prices should be the use which is made of the milk—that is, whether it is consumed as fluid milk or used for making sweet cream or for manufacturing purposes.

Because of the supply situation, the price of milk for fluid use should be highest. The supply of any market for fluid purposes is relatively limited. Transportation and inspection costs soon reach such a point that its shipment for long distances is not economical.

Milk for sweet cream should bring a price next to that for fluid milk. Any market's supply area is greater for cream than for fluid milk. Producers of fluid milk have to compete only with others in their own milk shed, whereas producers of cream for some eastern cities must compete with those in Canada and the Middle West.

Milk for manufacturing purposes, because of country-wide or world-wide competition, must necessarily be sold for the lowest price of all.

The cooperative association can do far more toward obtaining a higher price for its members by seeing that they are paid for their milk on the basis of its use and that their production throughout the year is even enough to reduce the proportion of surplus which has to be sold for the less valuable uses from month to month than it ever can do through attempted monopoly control or bargaining power.

In adjusting supply to meet market demands it must be kept in mind that too high a price for any period of time may result in an unbalanced market situation and a lower price in the end.



## LESSON 5 . *The Farmers' Elevator Movement*

W. J. KUHRT

**T**HE PRESENT FARMERS' ELEVATOR MOVEMENT may be said to have begun about 25 years ago, following two previous attempts which accomplished little more than to prepare a foundation for further cooperative effort. During the first two years the movement was threatened with failure, partly because of boycotting on the part of the established grain dealers who refused to handle shipments of grain from farmers' elevators. This situation was relieved, however, when in 1904 two Chicago grain firms decided to handle consignments from farmers' companies. Rapid organization of local companies followed and the movement spread to practically all grain-producing sections of the United States until now farmers' elevators may be considered the largest farmer-owned marketing system in the United States.

A few figures showing the size and extent of the movement in 1927 may be of interest. There are probably 4,000 farmers' elevators now operating in the surplus grain-producing areas of the country. Eleven state-wide associations have been formed, and these have com-

bined to form the Farmers' National Grain Dealers Association. About 65 per cent of the local companies are organized and operated as cooperative associations.

### *Associations Serve 850,000*

Reports received from 3,330 associations indicate that they have a combined paid-up capital stock of about \$57,000,000, and, in addition, a combined net surplus of nearly \$25,000,000. These associations have approximately 420,000 stockholders; including nonmember patrons, they serve nearly 850,000 grain producers.

In 1926-27 these elevators handled more than 500,000,000 bushels of grain of all kinds which sold for approximately \$460,000,000. In addition, the volume of business in side lines, such as livestock, coal, feed, lumber, machinery, and other supplies, amounted to about \$160,000,000, making a total sales value of all products handled of about \$620,000,000.

At this point we may well ask the questions, What caused this movement and what improvements has it made over previous conditions surrounding grain marketing at country points? It is rather generally agreed that grain farmers decided to organize their own elevator companies because they considered local grain-marketing conditions intolerable and saw no way to remedy these conditions except to organize and handle their own grain. Organization of local companies increased steadily from about 1903; and now, after a considerable period of operation, the movement can be credited with certain definite improvements in local grain-marketing conditions.

### *Results of Movement*

The farmers' elevator movement can be credited, first of all, with improvements in local grain-handling practices. I have in mind here such accomplishments as (1) the establishment of fairer grading, docking, and weighing practices, (2) establishment of relatively narrower local handling margins, and (3) the general development of more courteous and considerate treatment of farmers by all country grain buyers. These were among the most grievous causes of complaint at the beginning of the movement, whereas now there seems to be little dissatisfaction with local handling practices.

A second accomplishment has been the creation of a competitive situation at many local markets which has given farmers, in general, confidence that their interests are being safeguarded. Wherever a farmers' elevator is a factor in a local competitive situation, farmers usually feel that local prices offered are not fixed in some arbitrary manner, but instead reflect terminal market conditions.

A third general benefit of the movement has been the encouragement of better production practices and lower costs of production by grain farmers. Introduction of better seeds and improved machinery, the cleaning of seed grains, handling of farm supplies in large quantities at lower margins of profit, saving of dockage and transportation by cleaning commercial grains before shipping, and the grinding of dockage and other feed grains have all tended to benefit producers to a substantial degree in one way or another.

*Trains Farm Leaders*

A fourth accomplishment has been coordination of the movement through the formation of 1 national and 11 state-wide organizations of local companies, and the publishing of a monthly paper in the interests of farmers' elevators and grain producers. Aside from the specific services rendered by these associations, such as centralized auditing, insurance, adjustments, legal and other services, these agencies have tended to strengthen the farmers' elevator movement and bring about concerted action on the part of grain producers as a whole on matters pertaining to their general welfare.

A final accomplishment, and perhaps the greatest of all, has been the training of a large number of farmers in the technique and business methods of grain marketing. Membership in farmers' elevators, and especially service as directors of farmers' elevator companies, have developed many farm leaders and fitted many more farmers for greater responsibilities in the field of cooperative grain marketing.



## LESSON 6 . *Farmers' Terminal Associations* *Marketing Grain*

J. F. BOOTH

**T**HE TENDENCY in many lines of business to-day is toward consolidation and large-scale operations. In keeping with this tendency farmers have taken steps to enlarge and extend the scope of their activities in the marketing of their products. In grain marketing, as with some other products, this has led to entrance of farmers' organizations upon our terminal markets.

Two more or less distinct types of cooperative grain-marketing agencies are operating on the terminal markets of this country at the present time. One of these includes the cooperative commission companies, the other the pooling agencies.

The cooperative commission companies have been formed mainly for the purpose of handling the grain purchased by farmers' elevators. Certain of these terminal agencies have been formed by the Farmers Union, others by The Equity Union, and still others by the associations of farmers' elevators.

Successful operation of these terminal marketing agencies by farmers is a development of fairly recent years. The early associations of this type experienced some difficulties, not the least of which were brought about by the fact that organized boards of trade and grain exchanges, to which these agencies sought admission, were not so constituted as to encourage cooperative associations seeking membership thereon. Federal and State laws aimed to reduce the difficulties in this connection have been enacted.

There are at the present time farmers' cooperative commission companies on grain exchanges or boards of trade at Chicago, Kansas City, Omaha, Minneapolis, Hutchinson, and other cities. Several agencies are represented at two or more markets.

### *Associations Must Give Service*

These terminal grain-marketing associations are usually financed and supported by local farmers' elevators which own the capital stock and furnish the business from country points. In certain cases the stock is owned directly by farmers. The elevators that hold stock in these terminal agencies are not usually under contract to sell or consign their grain to them. The associations are thus compelled to obtain their business by giving service equal to or superior to their private competitors. That they have been able to do this is indicated by the fact that most of them number among their patrons farmers' elevators and independent elevators that do not hold stock and thus have no direct interest in the company.

Cooperative commission companies do not as a rule own local elevators, but in a number of cases they have leased or made contracts for the operation of local facilities. There are, however, one or two exceptions to this rule, and several other companies are now considering the possibilities of acquiring both country and terminal elevators.

The second general type of cooperative terminal grain-marketing associations represent what are commonly referred to as pooling associations. These are State or regional in scope and there are eight of them now operating. The membership in these associations is held directly by farmers. These pools either have their own sales offices on the larger terminal markets or are represented in joint sales agencies. The farmers who support these pools are under contract to deliver their grain over a period of years, usually five. The pools which confine their operations mainly to the handling of wheat make contracts with local elevators for the acceptance and delivery of such grain from farmers.

### *Two Methods Differ*

The cooperative commission companies and the pools are attacking this terminal marketing problem from different angles. The former receive their grain, for the most part, from local farmers' elevators which have purchased the grain from farmers at the market price. There are exceptions to this rule, of course, as for example when farmers consign their grain direct or through local elevators to the commission companies. The elevator or commission company which buys the grain, having paid the market price, must either sell or protect itself by hedging to avoid loss from declining prices, since it is not the practice of these agencies to conduct a speculative business. Thus this method of marketing results in grain being sold or hedged about as rapidly as farmers deliver it to the market. Those who favor this system of marketing contend that our organized grain exchanges are capable of absorbing heavy deliveries of grain without any serious depression of prices.

The pools, on the contrary, represent a somewhat different method of marketing and one which their proponents contend has a less depressing effect on prices. The pools take the grain delivered by farmers through local elevators but advance only about two-thirds of the market value and are thus reasonably well protected against declining prices. They are thus in a position to hold the grain until such time as they

think conditions are satisfactory for its sale. The members of a pool are paid the average price for which their grade of grain sold. Having advanced only a portion of the market value, the pool is usually in a position to make additional payments as it sells the grain and a final payment at the end of the pooling period.

It is not the purpose of this discussion to argue the merits of these two types of cooperative agencies. Time will bring out the advantages and disadvantages of each. The significant thing is that many grain producers feel that they should be represented in the terminal grain markets of this country by their own marketing associations and have made some definite progress in this direction.



## LESSON 7. *Progress and Problems of Cooperative Cotton Marketing Associations*

JAMES S. HATHCOCK

**H**ISTORY of farmers' cooperative movements indicates that most cooperative associations are formed during times of economic depression. Cotton farmers have made many spasmodic attempts, during periods of depression, to obtain a better price for their product. These efforts have usually taken the form of acreage-reduction campaigns or organized attempts to hold cotton off the market with a view to increasing the price. Previous to 1920 the efforts of cotton producers to organize for the purpose of bettering their economic condition were mostly of a local nature; there was no far-reaching attempt to organize all cotton growers into state-wide or regional associations for the purpose of controlling the entire crop.

The cooperative cotton-marketing associations with which this talk deals were developed as a result of the severe economic depression of 1920 and 1921. In June, 1920, Middling cotton at New Orleans sold for 40.64 cents per pound, and in December it brought only 14.64 cents per pound. The cotton crop of 1920 had been produced at high cost, and as a result of this tremendous drop in price the cotton growers and the business men as well were in sore financial distress. The cotton-marketing system was said to be at fault, and a movement was started to set up a new and efficient system to be controlled and run by the growers themselves.

### *Purposes of Cooperatives*

During 1921 and 1922, 15 state-wide or regional cooperative cotton-marketing associations were formed throughout the Cotton Belt. They were organized as nonstock, nonprofit, centralized associations and were incorporated under the laws of their respective States. In joining a member signed a legally enforceable contract which called for the delivery of his cotton to the association for a period of usually five years. The main purposes of these cotton cooperatives were to market cotton in a businesslike manner, to avoid dumping of cotton in the fall

through orderly marketing—that is, distribution of sales over the entire year—to secure for their cotton full value in grade and staple, and to effect savings by making direct sales to the spinners and manufacturers.

Membership increased from 55,000 in 1921 to 285,000 in 1925. The volume of cotton handled grew from 352,226 bales in 1921–22 to approximately 1,500,000 bales in 1925–26. Although both the membership and volume of business transacted have declined somewhat from the peak of 1925–26, it is estimated that during their period of operation the cotton cooperative associations have handled, on an average, slightly less than 10 per cent of the American cotton production.

One of the big problems that confronted the cotton cooperatives at the very outset was the problem of setting up an efficient business organization and securing a staff of competent well-trained men to handle this new kind of business enterprise. The leaders in the organization movement were not particularly well versed in business management nor in marketing practices, but in many cases these men became the responsible business officials of the cooperative associations. Some experienced men were brought in from the cotton trade, but for the most part the associations developed their business leaders from the group of individuals who had been prominently identified with the organization movement. Naturally, with a comparatively inexperienced personnel in charge and with a new type of business to be organized and operated, numerous mistakes were made during the first few years. It was inevitable that costly mistakes would be made under these conditions, but experience had to be gained, and it must be said to the credit of the associations that they are probably stronger to-day for having trained their own men.

### *Rely on Good Will*

Two other major problems at the present time are (1) winning the confidence and support of the cotton growers, and (2) developing closer contacts with the spinners and manufacturing interests by dealing to a larger extent directly with them. These two problems really summarize the purposes of marketing cotton cooperatively, as it is the function of the cotton cooperative to satisfy both producer and spinner.

Recent changes in the marketing contracts of most of the cotton cooperatives, which give the grower an opportunity to withdraw at some time during each year, and which provide optional pools for the members' cotton, are a splendid indication that the cooperatives are not going to rely on legal force to obtain deliveries in the future, but are going to develop good will on the part of cotton growers by rendering them superior marketing services.

Cooperative gins are being developed by some cotton cooperatives for the purpose of better and more efficient ginning, to stimulate local interest in cooperative cotton marketing, and to better relate the whole field of cotton production, processing, and merchandizing in order to render more efficient service to both producers and spinners.

The cotton cooperatives to-day are probably better organized to perform efficient marketing services than ever before. They should continue to make headway, and should ultimately become the leading cotton merchants of the country.

## LESSON 8 . *Cooperative Marketing of Livestock*

C. G. RANDELL.

LIVESTOCK is marketed cooperatively through two types of associations, the local shipping association and the terminal cooperative commission agency.

More than 50 years ago the first local livestock-shipping association was started. The movement made little progress for the next 40 years, and it is only since 1915 that numbers of local shipping associations have sprung up in the Corn Belt and other sections of the United States.

There are now approximately 5,000 of these associations in the United States, of which 3,000 make livestock shipping their main business; the remainder handle livestock as a side line. The volume of business handled varies from a few carloads to more than 1,000 carloads a year. In 1926, the total value of sales by the livestock locals was approximately \$400,000,000.

### *Make Savings for Farmers*

According to published reports, local shipping associations are able to make substantial savings for farmers. Investigation shows that in Iowa net savings of from 20 to 75 cents a hundredweight are being made by the majority of successful associations in that State. This seems to have been the experience of several other States as well.

Local shipping associations aid farmers in the following ways:

(1) They help the large feeders as well as the less-than-car-lot shippers by shipping the stock when it is ready for market.

(2) Local associations furnish a medium through which the terminal associations can reach the producers with information on market situations and probable trends of receipts and prices.

(3) Managers of local associations encourage livestock producers to accompany the association shipments to market, thereby familiarizing farmers with market methods and practices.

Local shipping associations are supporting the terminal commission agencies. In 1926, reports show that local shipping associations furnished approximately 65 per cent of the receipts of the terminal livestock associations.

The first terminal cooperative association was started in 1889. A second attempt was made in 1906, but the first permanent association was organized in 1917. Since 1917, terminal livestock commission agencies have been organized until to-day there are 25 of these agencies operating on 19 central markets.

In 1927 the terminal livestock commission agencies handled approximately 11,000,000 head of livestock valued at about \$267,000,000. Since the beginning of operations the terminal agencies have handled around 62,000,000 head of livestock, with a value of about \$1,400,000,000.

From the beginning of operations to the end of the year 1927, the terminal cooperative commission agencies saved for the farmers, in reduced commissions and in amounts paid back to shippers in the form of cash refunds, approximately \$5,500,000. In 1926 they handled, on an average, over 16 per cent of the total livestock on the markets where they operated.

### *Aids to Livestock Producers*

The terminal associations are aiding livestock producers in the following ways:

(1) They work with the traffic departments of the railroads to secure better train service, and with local associations and individual shippers to help them secure better facilities for handling livestock at local points.

(2) They assist in the organization of shipping associations where needed and where the farmers in the community want an association.

(3) Transportation and claims departments have been established by some associations. Credit corporations have been organized to finance stockmen in their feeding operations.

(4) Livestock pools are being operated whereby stock can be moved direct from range to feed lot.

(5) Educational work is being carried on by inviting groups of livestock shippers, educators, and others to the markets, so they can study the problems involved in the marketing of livestock and become acquainted with market methods and practices.

(6) Special consideration is being given to girls' and boys' clubs and to vocational agricultural activities.

(7) Information is being given concerning markets, prices, and cooperative marketing in general through official papers and other publications.

(8) Some terminal associations are cooperating with the extension departments of the agricultural colleges in arranging for livestock-grading demonstrations to be held in their trade territories.

These farmer-owned and farmer-controlled livestock-marketing agencies have made substantial contributions to the livestock industry and to American agriculture. Much more, no doubt, can be expected from them in the years that are to come.



## LESSON 9 . *Cooperative Marketing of Fruits and Vegetables*

A. W. MCKAY

**C**OOPERATIVE MARKETING of fruits and vegetables has been characterized by the development of local associations. The oldest of these associations of which the Department of Agriculture has record was formed in 1878. They began to appear in numbers in the nineties. By 1915 there were approximately 900, according to records of the department, and at the present time there are probably not less than 2,000 associations which market one or more fruit and vegetable products.

In many instances local associations have federated to form a central agency. In the federated form of organization growers are members of the local associations, and the locals in turn are members of the central agency, which is controlled by a board of directors made up of representatives of the locals. At present there are over 20 federations marketing fruits and vegetables in the United States, representing over 850 local units and 60,000 grower members. The largest of these is the California Fruit Exchange, the organization marketing Sunkist oranges, which represents 204 local associations, and transacted a business of \$85,000,000 in 1927. This is also the oldest of the federations, as it was formed in 1895.

### *Functions of Units*

In most of the federations the local units attend to the assembling of the products, as well as grading, packing, and loading for shipment, while the central agency looks after selling, collections, transportation, and other general matters.

Other large-scale associations marketing principally dried fruit are of the centralized type. The growers hold membership directly in the central association, and local plants are owned and operated by the central. Raisins, prunes, dried apricots, peaches, and figs are marketed by associations of this kind.

Fruit and vegetable associations have been formed because the growers believed it was possible to carry on the assembling, grading, and packing of their products more economically and more efficiently than these were being performed by privately owned agencies. In many instances concentration of a relatively large volume of products at local points has permitted associations to effect substantial savings for their members.

Even more important, however, have been the improvements made in preparing the products for market. The fruit and vegetable cooperatives have been instrumental in improving handling, and packing methods, and in establishing standard grades. The perishable nature of most fruit and vegetable products and the lack of uniformity in the size and grade of the average crop make necessary the establishment of standards which will constitute a common language between seller and buyer. Cooperative associations, particularly, find grade standards necessary, not only to enable them to sell efficiently and economically but also to enable them to make returns to their members on the basis of the grade and quality of the product delivered by each. Most fruit and vegetable associations pool returns to their members. In other words, settlements with members are made on the basis of the average price received for products of the same kind, variety, and grade delivered during the pooling period which may extend over a week, several weeks, or an entire producing season.

### *Grades Stabilize Markets*

For the reasons given, cooperative associations handling fruits and vegetables generally have adopted standard grades, and by so doing have stabilized the market for their products.

Wider distribution of fruits and vegetables has been facilitated by the formation of large-scale cooperative organizations. The market information available to these agencies and their widespread market contacts enable them to sell the products of their members at the place, and, with limitations imposed by the perishability of the products handled, at the time of most active demand.

Several associations have been active also in the development of new uses for fruits and vegetables and in the manufacture of low-grade products into by-products. The popularity of orange juice and the use of raisin bread, for example, may be traced to the merchandising activities of cooperatives. The fruit associations were among the first to use advertising to stimulate demand.

The cooperatives marketing fruits and vegetables represent over 200,000 growers, and their annual business is approximately \$300,000,000. They are to be found in practically every fruit and vegetable section and have rendered important services to their grower members.



## LESSON 10 . *The Members' Part in Cooperative Marketing*

J. W. JONES

**A** COOPERATIVE MARKETING association may have many secondary or incidental aims and may bring incidental benefits, but the primary purpose—that of marketing—should not be lost to sight. Because cooperatives are democratic organizations, the business of marketing is not left entirely to the management. The member plays a distinct part in making improvements in marketing by means of cooperative effort; and it is most important, therefore, to educate the membership in marketing problems and policies.

Marketing problems begin with production, and, therefore, the members of a successful cooperative integrate production and marketing, and thus assist the management in meeting these problems. Marketing at the present time is more than simply making a sale or sales at the highest possible price. It involves obligations to the buyer, and the more these obligations are understood and appreciated by the members of a cooperative the better the management can execute sound policies and improve marketing services.

### *Some Questions for Leaders*

So cooperative leaders may well pause and ask, How well prepared is the average member to perform his part in solving the problems incident to improvement of marketing methods? Is it true that in our organization work we have left the impression that the farmer's part is only to join the association and then wait while the management achieves the result of more satisfactory prices? Do the members realize what must be done before better prices are obtained? Are they depending too much on the increased bargaining power of the association or upon

monopoly influence without seeing their own special task which is to modify production practices in keeping with market changes? Before the full possibilities of cooperative marketing can be realized, these questions must be answered and the problems suggested in them must be met and solved.

The Division of Cooperative Marketing in the United States Department of Agriculture has been making studies of membership relations of cooperative associations during the last two years. More than 2,000 farmers have been interviewed as well as cooperative leaders and members of the trade. These studies indicate that there is much to be done before the membership of some cooperatives will function with efficiency.

Members select the management either directly or indirectly, and therefore get the kind of management justified by their interest and degree of understanding of marketing problems and methods. When members of associations vote for directors they have an opportunity to approve previous management policies or to reject them by voting for directors committed to definite changes. In a few instances requests for changes in management policies have been construed by those in power as an attack on the fundamentals of the association, and in this way changes have been strongly resisted. Gradually, however, it is coming to be recognized that some things formerly held to be fundamental are not essential. At any rate, because the members are the association, they are entitled to determine the policies and methods of operation and express themselves regarding them.

For the members, and the members alone, does the cooperative association exist, and their wants and wishes should have supreme authority in determining the policies of their association. Of course, if their wishes are not in keeping with sound economic principles then disaster may result. For this reason it is most important that the general membership of a cooperative association know the fundamental economic principles of marketing, its limitations as well as its possibilities.

### *Members Are the Association*

Members also have an intimate connection with the quantity and quality of products handled by the association. In associations handling the produce of members only they have the final authority. Members alone can coordinate production with marketing and make changes in production practices so as to better serve market demands. These changes in production practices may involve changes in varieties produced, better handling and care of the product at the farm before delivery to the association, and other factors. The association itself must determine the quality of products delivered to it, and it is up to the individual members to assist in creating consumer preference and good will by improving and standardizing the quality of their product.

In brief, it may be said, then, that the association is the membership and the members are the association. They formulate its policies and select its management if the association is truly cooperative, and provided the expression of the will of the members is not thwarted by groups seeking self-interest.

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